CNN - STS-95 COUNTDOWN AND LAUNCH -JOHN GLENN'S RETURN TO SPACE (10-29-1998)

https://www.youtube.com/watch?v=TkeJQVAzgHQ (https://www.youtube.com/watch?v=TkeJQVAzgHQ)

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From Thursday, October 29th, 1998 CNN Live coverage of the countdown and launch of STS-95 and the return of John Glenn into space. In 1962, Glenn was the first American to orbit the earth. In 1998, After a career in the United States Senate he was heading back into space.

- Launched at 2:19:34 P.M E.T/ @3:11:40

- Coverage starts at 8:08 A.M E.T with reports and full coverage begins at 11:00 A.M E.T with CNN Miles O'Brien and special anchor Water Cronkite.
  Coverage ends at 3:00 P.M E.T.

  The STS-95 Crew:
  Commander :Curtis L. Brown

  Pilot :Steven W. Lindsey

  Mission Specialist 1 :Pedro Duque, ESA

  Mission Specialist 2 :Scott E. Parazynski

  Payload Commander :Stephen K. Robinson

  Payload Specialist 1 :Chiaki Mukai, NASDA

  Payload Specialist 2 :John H. Glenn

- "The launch was rare in that the official launch weather forecast provided by the 45th Weather Squadron was 100 percent for favorable weather for launch as well as the Shuttle Landing Facility" - CBS NEWS

- This launch was also viewed in person by President Bill Clinton, being only the 2nd U.S President in history to watch a launch in person. The Other being President Nixon watching Apollo 12 takeoff in 1969.

00:00:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ) suppose i'd say i was anticipatory what is uh from an informed view what is the scariest part of the ascent that we're going to see hopefully at 2 pm eastern today well when you start up those engines you you hope that they're all going to run well and then you hope they're going to run well for eight minutes and 30 seconds that's certainly go ahead oh that eight minutes and 30 seconds is critical isn't it it certainly is uh anytime you've got all that power coming out the back end of the shuttle uh the orbiter you have to be worried about it and i think if you get past the first eight minutes and 30 seconds john glenn will have the time of his life now take us back 36 years ago as i recall uh the john glenn mission was delayed about 11 times over the course of uh three months they finally launched in february of 62. uh i am curious this this particular countdown has gone smoothly does that make an old launch director such as yourself more nervous or less nervous uh no i love it that way and i think they all do uh we had a lot harder time counting down our rocket then than we do now but with all the worldwide network that we had to make ready we had a lot of things going for us that had to be done well and done correctly and done uh in sequence so it was a lot more difficult than it is today these things today they've got a lot more experience with and they know what they're doing they get it done and they know how to get it done quickly and do you think it's a good idea is it too much of a risk to be sending john glenn back into space of course not this shuttle is a great machine i don't say it flies without risk nothing was uh is without risk certainly in the in a space rocket but this is a great machine and i think you can count on it and if something goes wrong i guess that's the way it was meant to be but uh i think he'll do fine christopher kraft the legendary flight director through mercury gemini and

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director through mercury gemini and apollo we appreciate you joining us from houston this morning thank you very much it's a pleasure to be here all right and just a little bit later we'll be continuing our trip down memory lane as we will all throughout the day we'll be talking to buzz aldrin the second person to walk on the moon miles o'brien cnn reporting live from the kennedy space center cnn's live coverage of the space shuttle launch begins at 1 pm eastern today we're the name of the game in our days and uh i believe that the flight control team is fully capable of doing any job they need to today all right but having said that 3 700 members of the media here the president of the united states assorted members of congress celebrities 300 000 people lining the beaches here in florida how much pressure are they feeling behind me in that launch control center in mission control the only pressure they have is the technical pressure to get the job done we're pretty well insulated there and the training process we have is absolutely rugged and realistic those controllers are looking at how to do the best job technically and they're going to make the calls in that fashion gene krantz a man who was there for mercury gemini and apollo became one of the great flight directors thanks so much for being with us on cnn this morning miles it's a great day oh it is a great day all right let's move along to mark potter who is about 10 miles due west of where i sit titusville florida where some of those 300 000 people expected people are getting ready to see quite a show they hope mark yeah everybody is waiting and they're excited they've been here for hours we're in a park in titusville that was set up a viewing area set up by the kennedy space center they're expecting 8 000 people at this area alone and i think a lot of the people are already here now uh from the uh the umbrellas and the coolers and all it looks like a day at the beach and in effect that's what it is we're on the shore of the indian river and everyone is here awaiting the the big show now they started arriving here early this morning even before the sun rose we saw a beautiful sunrise coming up over the indian river today the gates opened at 5 15 people were already here

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were already here we were out on the roads early we saw the trailers out there and people coming in on the roads and some people told us they were out there three o'clock four o'clock this morning and they have come here from all around the country there are even people here from foreign countries to watch this historic event we've got some of those uh folks with us here today uh among them dick gordon hi mark how are you fine sir how are you this morning good uh former astronaut flew on gemiini 11 apollo 12 what do you think about this mission i think it's wonderful i wish i envy john a lot right now i wish i were in his place what do you think about this mission now in terms of its historic importance well i think it's extremely uh important in that regard it's been 36 years since john flew his last flight and this is the second one he's going to have a new experience with this one well thank you very much and you'll be watching it from here mark i will i'll be on qvc doing some educational work for action products out of orlando thank you very much enjoy the show thank you mark now martha and lloyd connor are also with us they've come here from pittsburgh all this way uh just for this flight marthan why did you think it was so important to be here today well i'm very patriotic and i wanted to be a part of history and this is uh definitely an historic moment oh yes it sure is now what do you think about it being john glenn particularly well um being from pennsylvania and him uh being from ohio he seems like a neighbor well very good and thank you you'll be seeing him shortly we hope uh flying right out here over the indian river thank you very much and miles there that's the story here thousands of people expected thousands already here uh back to you cnn's mark potter out with some everyday folks and some not so everyday folks good to see dick gordon there all right stay with cnn all day long we have extensive live coverage planned for this historic mission the return of john glenn to space 1 pm eastern time a special guest will be joining walter cronkite and me president clinton will be our guest and he'll talk to us about the space program and its future as it embarks upon that ambitious international space station with the clock holding at t minus three hours we now leave you live from the kennedy

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we now leave you live from the kennedy space center miles o'brien all right miles thanks certainly will be in touch throughout the morning as miles mentioned complete coverage throughout the morning and the afternoon again blastoff scheduled right now from florida for 2 p.m eastern the brink of his fifth flight in orbit discovery commander kurt brown is a seasoned space traveler who likens rides in the shuttle to camping trips you unpack and set up your camp and you found the good fishing hole and the fish are biting and about that time you have to pack up and go home and you're not able to take advantage of all the things that that you really got going for you so much to do so little time that's how the discovery 7 views their mission i was thinking maybe not everybody knows why we call those payloads that means you load the shuttle with something and somebody has to pay for it to fly spaniard pedro duque is the rookie of the group he's been waiting six years for a flight he will be the first person from his country in space his crewmate jackie mukai is the first japanese woman in orbit more than 80 experiments will be staged on the decks of discovery they run the gamut from plant growth to oyster toadfish to cockroaches in outer space but the crew isn't worried nasa assures us the roaches will float in but they won't float out and joining the menagerie a very famous human guinea pig jean glenn will participate in studies looking at changes in how we sleep how we balance and how the heart reacts to time spent without gravity we learned some new things which we're trying to do and that's the purpose of the whole program is to learn new things that benefit people right here and if i at this stage of my life can have an opportunity to do some of that then i don't look at being a guinea pig as being bad i look at being a guinea pig as being very very good the crew will also be doing some important work outside the shuttle one of those jobs deploying the sun gazing spartan satellite during a mission last november the three thousand pound satellite tumbled out of control after a software glitch and some human error

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error during this re-flight spartan and crew procedures have been upgraded the satellite will look at the sun's corona and solar winds which can hinder telephone and television communication on earth also in the shuttle's payload bay a cluster of instruments to be tested for possible installation into the hubble space telescope during its next servicing mission in the year 2000 even by nasa standards this is a very busy shuttle mission we think it's a very unique flight of course any flight that you're on you think is the best flight ever invented but we're very excited about this one because it's a it's an integration of i think everything the shuttle was ever designed to do or had ever been envisioned for the use of a space shuttle no doubt it's the most scrutinized mission in a very long time the crew of discovery knows no matter how it goes the whole world will be watching miles o'brien cnn at the kennedy space center here what a beautiful day for a space shot it is these are live pictures from the goodyear blimp the goodyear blimp stars and stripes this year marks the 72nd consecutive year for goodyear blimps if you want to learn more about that fleet we invite you to check out www.goodyear.com let's go to www.markpotter.com who's down there somewhere in the midst of that crowd he's found some regular old folks and some famous folks as well who are here to see what they hope is a spectacular show mark well miles we are indeed here on uh uh in a viewing area set up uh in titusville uh it's there are 8 000 people here they're all here eager to see the uh uh the launch they've been here for hours they got here early this morning many of them the the gates opened up at 5 15 and there were people here waiting they had jammed the roads and they're here now uh just waiting for this to happen we're hearing a a rock band right now uh entertaining the crowd a moment ago it was a little more uh somber they sang the national anthem now i want to introduce you to uh some

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now i want to introduce you to uh some interesting people who are among the crowd uh this crowd that looks like it's a a sunday at the beach with all the the uh umbrellas and uh the coolers and everything we have a couple of very interesting folks that i want you to meet uh first of all crystal lee is uh with us and you're here for a particular reason uh chris tell us why uh well i was just really excited to hear john glenn going back up because i was born february 20th in 1962 when he first orbited the earth and the fact that i can come back here and experience it again 36 years later is just really fascinating and unbelievable experience now you told me a funny story about your father the dilemma he faced on the day of the launch tell me about that yeah my father always told me only i didn't understand the significance of what a huge event this was until i got to see it now on the news uh the old stories uh he was torn between which event to go to which was most significant and now i understand why and what did he end up doing of course he came to see me very good good choice now you said you always wanted to meet john glenn right yes that is a big dream of mine to be here i'm fascinated by his work and what he's doing for the aging the work that i'm doing now i'm a parish nurse working in a church which is largely a population of people over 75 and i do a lot of health promotions and and discuss the research on aging and um i just think it's great that i could be able to say i met john glenn in my eye let me introduce you to our next guest very quickly sir tell her tell her your name hi kristen my name is john glenn i checked his driver's license right there's credit cards he is john glenn and he's here today tell us about very quickly this uh uh why this is so important to you to be here well i i grew up with the name i was born two years before john glenn became famous and all throughout my schooling i went to aviation school i went to law school when he was a senator i'm a pilot and all through that i became the center of attention any time my name was called and today particularly today particularly john thank you very much we've got to go thank you enjoy the flight both of you

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thank you enjoy the flight both of you thank you okay miles that's it back to you all right that's cnn's mark potter in titusville about 10 miles away walter i happen to be holding a book here as an author i like to see books held up the television audience of course but this is a special one very special i just had a little while to look at it but it's an eyewitness account of a paddle by astronaut explorer artist moonwalker alan bean indeed alan bean is all of those things he was the fourth man to walk on the moon he was the commander of the second skylab mission he is an artist an explorer it says here moonwalker all those things and he's with us you're with us glad to be here good to have you here it's good to go tell me something these guys are out there now then the ladies out there now they're suited up they're getting suited up had breakfast are there are there butterflies despite the coolness of the test pilot attitude are there butterflies at this moment well i think there are a few but fortunately nasa has you suit up and go do this a couple of times so it has a feeling of unreality that maybe this is like the training maybe we're really not going today so it helps solve some of these butterflies it's only in the last maybe 15 or 30 minutes that you begin to say everything's working we're going today alan bean of course apollo 12 your mission uh was launched in the presence of president nixon and it was launched right into a thunderstorm and a lot of historians have looked back on that and said those nasa controllers felt a little bit of pressure we could make an analogy to today the president is here will the people in the launch control over there control center be under uh enormous pressure to launch this thing no matter what i don't think so they're aware he's there but particularly after challenger i don't think anybody in this business is going to respond to pressure we've learned our lesson no we've learned our lesson maybe in the past i don't know but john glenn

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in the past i don't know but john glenn is uh not only living the dream that was mentioned earlier for him i think he's living the dream for so many people in the world particularly someone like me that's 66 and just to see him go up and see when he comes back we're going to love it so much we're going to say hey i can start a new career i'm only 70. you'll have to get your palate out and do another picture of another hero oh that's right that's right but he's going up there for all of us it's different than most astronauts you know i wondered why uh nixon came to see the second apollo mission was it because of alan bean uh being a board do you think i i don't doubt that a bit i don't tell pete conrad and dick my theory was that nixon was so careful of his image he decided to see if the first mission got to the moon all right yeah they admitted he'd come and watch the second more of a sort of thing yeah presidents preserve their image in some ways i don't know if you saw earlier but uh our correspondent mark potter in titusville found dick gordon in the crowd there watching from uh the crowds there among the winnebagos oh really yeah there's more astronauts down here than i've seen at the space center since apollo 11. the exciting we're all older too you know he's going up there for us so it's really a lot of excitement i hope that nasa doesn't just say well we did it one time forget it my hope is that they maybe send tom hanks in six months or they approach you walter you would be a perfect person to go into space and observe and come back and tell us things that test pilots like myself can't tell we don't know i find it very disappointing that nasa through all the years since challenger has not come around to restoring the civilian in space program particularly getting a journalist up there should have an artist up there should have a poet up there yeah these people should interpret for us what the space is like uh to the non-trained astronaut but you can understand the reluctance post challenger christa mcauliffe of course the first teacher in space i can't understand the reluctance because exploration is all about risk

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because exploration is all about risk and the people that are going to do it are willing to accept the risk and say it's worth uh nobody's being drafted to go absolutely not and uh we need to make make people understand that you know the future of space flight is not just for healthy young men and women in the prime of life the future of space flight 50 100 150 years from now it's for everybody it's we we need to begin to get that thought through now that that's where there is genuine science involved in this fight despite what critics say about it yes we have to begin to establish what the parameters are for those who go into space and one of the important parameters will be as the generation get older and older is how old you can be and go up there and function properly absolutely as well as the benefits on earth to finding out the similarities between space flight and aging on earth that's going to be helpful to all of us let me just break in for a moment we're going to show a picture here this is the final inspection team which is on the gantry leading over to the shuttle final inspection team performs an important job they go in and make sure that first of all that the cryogenic fuel that's a fancy word way of saying that it's very explosive and also is very cold uh has not created too much of an ice glaze over the external tank that ice glaze upon launch that can break off and can cause some difficulties for the protective heat insulating tiles on the space shuttle thousands of them covering the space shuttle they're on there now and i'm thinking alan being a lot of reliance upon the ground crew a lot of trust must be instilled upon them i know astronauts feel a real bond don't they we do if people don't do their jobs you're in trouble and you have to count on individuals caring a lot i think that's why our space program has been as successful as it has been people care you talk with them when i see people that retired from the program after apollo that was the highlight of their career i know since you've said several times reporting the space activities is one of the great highlights of your career people care about this all right let me

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people care about this all right let me about dive in one more time there's commander kurt brown in his launch and reentry uh suit he's giving you a little uh idea of what the ascent is going to be all about hopefully at 2 p.m eastern today kurt brown told his mother he was on this flight she's normally ho-hum she said you're going with senator glenn really pilot steve lindsey he'll be sitting in the right-hand seat on the ride uphill as astronauts like to call it he thinks that glenn's flight is the first step toward bringing civilians tourists even in his space ellen bean i know you'd second that one wouldn't you i definitely would i i think it's time you know nasa does a wonderful job but we do a hundred percent science technology we need to start thinking maybe 98 science of technology and two percent all right public interest this is the man uh pedro duque the first spaniard to uh go into space hopefully at 2 p.m eastern today the man they call juan glenn juan glenn he is a national hero and he's been waiting six years to fly long time to wait uh he is the space rookie on board this particular mission of discovery these suits have come a long way haven't they walter uh uh these things uh combined with all the gear away 83 pounds uh they have liquid cooled underwear and it's a long way from those silver mercury suits they're steven robinson by the way a lot more mobility in these suits than there used to be in the old suits obviously you can hardly bend your arms well that's right now they don't have to go eva in these sutures you know they're just for survival in a bit of a problem now steve robinson by the way i just want to say tell you steve robinson is looking forward to greeting john glenn to space because the first time john glenn was there he was all alone and there's scott perezinski who has a resume that uh well it's like a telephone book the guy has been everywhere done just about everything among his many titles he is a medical doctor and uh mission specialist and the flight engineer who is the person who sits behind the commander and the pilot checking all the instruments and gauges we have you know one of the criticisms leveled against the plate they're always naysayers of course of any of these things and then you've got to pay attention to

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attention to the downside as well but there's been mention there's another medical doctor going up today the the the the idea that there are two medical doctors going uh some people see as protection for john glenn this crew was selected long before john glenn was added to it uh and it has nothing to do with the fact he's going to be able to point worth noting and there he is john glenn there he is looking he's smiling he's beaming as i guess we'd suspect uh walter you've known him for years what's he thinking now do you think what's he thinking about yeah well i think he's thinking about the very thing he said he'd be thinking about he doesn't want to mess up he's a perfectionist john always has been he was sometimes thought of the boy scout of the original seven astronauts uh and uh he i'm sure is intent right now on all of the things he's been learning grilling with the last several months and being sure that nothing uh that he doesn't do anything wrong and uh you know he kind of looks like the michelin man there we should explain to folks at home what they do is basically inflate these suits to make sure there's no leaks and uh when they inflate you kind of feel like a michelin man right allen bean you do and the helmet pops up you noticed it for a while we could only see his nose and now it's deflated but he's ready to go that's what he's thinking about too he's thinking i hope this all checks out we don't want to change the suit here at the last minute he's uh he's ready he's he's smiling john's probably also thinking about those ten times that his mercy seven was getting ready to go and didn't get to go oh yeah the 11th attempt before he ever got over the ground four times he was suited up twice he was at the top of the pad uh ready to go and the mission was cancelled he undoubtedly thinking about that today you know he said he never got frustrated or angry during that he just uh sort of took it a day at a time an hour at a time alan is that is that the best way to approach a mission like this you have to just sort of think about the immediate future i'm not sure what john glenn was saying to himself about that what he said to us and the press was it just gives us a

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and the press was it just gives us a little more time for a little more experience yeah that's right he has great self-discipline as you said has a boy scout image which is good to have particularly in this profession so i think he's just happy to be there and he he knows he's living the dream for all of us he he's got a lot of responsibility to come up there and say things that we can't say that we don't have the insight that's one of the great reasons to have him go instead of someone else that's right that's the whole idea of the civilian in space in a sense today what we're taking is uh is a hero back to space but we're also taking a man who spent 24 years in the united states senate forever has a feeling for the pulse of the american public he knows what is needed to tell them about space flight and uh therefore should be exceedingly valuable spokesman he has been all along that his validity will be reasserted today by this next fight let me ask you ellen let me ask you briefly if if john glenn had not gone on to politics and become a democratic senator from ohio do you think he'd be here today uh i think it's quite possible i think it's quite possible that nasa would realize that we have to start sharing space with people that aren't pilots and scientists and he's the perfect person to go he's old he looks old i love that part about him we shouldn't send him if he didn't and he's going to be able to go up there and have a great job all right he's going to go up there he's going to have a great flight he's going to come back we're going to feel he's going to raise the bar for people 66 like i am and say i can do more look at him absolutely there's the famous van which uh sends the astronauts on their three mile or so trick trip out to launch pad 39b it is standing by outside the operations and checkout building where those suits are being tested back to the launch gantry we go where the final inspections are taking place in preparation for the crew to arrive uh alan you know as we look at a shot from the goodyear blimp here the crowds

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the goodyear blimp here the crowds everybody keeps saying this is like an apollo moonshot of some kind given the crowds and the overall atmosphere would you concur with that i would concur definitely there's more excitement than i've seen in the air since apollo 11 and people care about this they care about it i speak frequently i'm around the country i've not met one single person that didn't think this was a great idea i usually then say to them would you go i'd say about a fourth say i'd love to go yeah i'm sure they would what about those uh allen i'm sure you've heard it maybe not directly who say it's a very risky stunt on the part of nasa to do this and the science is merely a way of uh trying to cover that fact well we first of all we don't think we do stunts so we're very careful about that we don't want to do anything as a stunt all we want to do is minimize the risk to make the progress we can make in this wonderful field of space so i'm sure that everybody there feels that way wants to make it as safe as possible but it isn't without risk but he's ready to take it and many people would would welcome the chance to to go make this uh how do you feel about it walter if someone approached you oh if they came up here now i'd walk out there and get on that one that's what i mean it's not a suit forever yeah see you're that's right you're john glenn's backup today oh of course you know every red-blooded american i should think every red-blooded human being would want to get up there i i can't imagine anything with the thrill of the flight but also all right we're looking abroad i've got to interrupt briefly that's the president the first lady heading to marine one the south lawn of the white house their ultimate destination patrick air force base about 10 miles from where we sit and ultimately to the roof of the launch control center to witness this launch go ahead walter i'm sorry to interrupt maybe with the with the circumstances today he'd like to go up well it's going to be a great experience for both of them there's nothing like being here compared to looking at it on tv don't you think of course we're going to have to

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to have an exclusive interview 1 p.m eastern with the president well it's like everything else the uh the view from by television is always better than actuality i mean we are here two miles three miles away from this thing you're gonna see those close-up pictures of that blast and then you're gonna you're you're gonna feel more like you're aboard that rocket than we are sitting here watching it live it has some emotional component about the noise and the fact it leaves and the smoke and the excitement and the risk is part of the feeling of elation when it works it's just i don't know how to explain it but he's i'm glad the president is coming with the first lady they're both going to be a little bit affected by this right we should point out uh the mission uh clock now stands still at uh t minus three hours and holding we have i think about 15 minutes left in that built-in hole that's a perfectly routine uh thing it's a two-hour hold which uh is built into the whole uh concept of a countdown here at nasa the idea is to give the crews an opportunity to catch up on work which may have spilled over kids gives them benchmarks in time sometimes however alan i wish they'd just set the clock and keep it simple yes they would but we learned that we can't keep it simple with something that complex but you know we were seeing a few minutes ago in the suit room getting suited up i can remember going out to both of my missions you leave there and you've got a little blower that cools you off and you why it suddenly gets quiet no one's talking to everybody was around them there you get a little van they connect you up but nobody says anything it's so quiet nobody knows what to say you're just sitting there it's too early to wish everybody good luck at the same time getting to go on a great adventure and i remember getting out the launch pad and riding the elevator and i thought where are all these people that used to be here there used to be two or three hundred working on it we saw some a minute ago they won't be there the crew's going to get out there and they're going to be wondering why they're the only ones there tell me as space commander but what for your last words before blast off internally on the internal communications to your crew well i was just asking that all of us

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well i was just asking that all of us could do the best we could do i think the fear among astronauts as you pointed it out earlier about yourself walter is that when if something comes up where you need to know what to do that you learned in training you hope that you can remember it you know there's a lot riding on this not because people are watching but because this represents the united states of america and you feel that sort of thing i felt it walking on the moon and you you think i hope i can do it and then finally you fall back and just say i want to be able to give my best effort i want to be able to do the things that i've been trained to do that's all you can ever ask on something i'm sure that's john's thinking like you said he wants to do what he was supposed to do and do it well all right let me break in we have uh live pictures of the president's helicopter marine one as it lifts off from the south lawn of the white house he's headed over to andrews air force base short chopper ride away on to air force one he comes and southward he heads we should be seeing him here about 12 15 p.m local time that's eastern standard time and with that uh we will leave you with the clock holding at three hours and soon to resume in about 20 minutes live from the kennedy space center miles o'brien along with walter cronkite and alan bean stay with us live pictures from titusville florida about 10 miles due west of the kennedy space center a picture perfect day for a rocket to blast into orbit and uh it looks like certainly the weather is 100 and so far knock on wood the orbiter is as well walter cronkite's with me here and uh we're counting down to launch right now we're at three hours and holding it's a planned hold you know an interesting thing is that we talk about the weather here which we can see it's absolutely beautiful gorgeous but the consideration always is where what

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the consideration always is where what the weather is like at the possibly abort this or landing sites if things go wrong on the launch the spacecraft has to get back down they've got these uh positions along the path of the up to orbit where they can go in for landings in africa particularly and in spain uh the weather has to be good there as well so apparently from all of our reports the weather is good around the world for this flight that's the the gods are shining upon us i think walter you know i know you've heard john glenn talk an awful lot about his hometown he talks about new concord an awful lot his formative years there i think it has a lot to do with his personality doesn't he one of those rare people who spent his whole life there i mean when he was born nearby moved to new concord infant had nothing to do with the decision to go to new concord but uh but he has never left there except to go around the world a few times and set speed records to be in the senate for 24 years except concord is still his home it was there that he met annie uh his wife they they say they met in the playpen i have heard that knowing each other they're babies old family friends well it's a place uh that says a lot about john glenn ohio is a place that says a lot about astronauts i'm told that ohio has more astronauts than any other state 23 astronauts have hailed from the buckeye state jeff flock is in new concord maybe he has an answer to the question why why ohio you got to be awfully careful about those shootings go ahead go ahead jeff walter miles we've got uh probably a room full of astronauts this morning i am standing where 60 years ago john glenn sat instead of on the launch pad it was here in this classroom this is now new concord elementary school instead of new concord high which it was when john glenn was here and we've got a classroom full of fourth graders that are pretty excited about what's going on down in florida today and i guess i would ask you guys first why are you excited john because

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why are you excited john because john glenn's going to be the oldest person to go up in space why else why else are people excited about john glenn's launch today chelsea um because he used to go here and he's a and he's really a good role role model for us that's right he comes back here a lot i know to visit uh why else yes allison why because john glenn was an american here just by going in space by orbiting the earth three times and now by being the oldest person in space he will be a hero again wow that's great is anybody worried about john glenn today who's who's worried about john glenn i'm afraid that the rocket ship might blow up or something bad might happen have you ever seen a rocket blow up before no okay good people didn't watch the challenger aaron why are you concerned i'm not really concerned um because most of the rockets nowadays don't explode and um and if it even does explode he's already been a hero so it won't be like his first time trying to be a hero anybody else got any concerns about john glenn today hope um i'm worried because if since space um i don't know if he can handle the um non-gravity because he's older than than he was before do you think it's neat that somebody older is going up in space and if so why why kelly he's old he's 77 right yep do you think that's gonna be a problem no yeah okay what would you be thinking i know we were watching the television earlier what would you be thinking if you were on the launch pad like john glenn is right now greg um how it is going to go when you go up in space you'd be wondering what it was like what about you kim what would you be thinking right now i'd be thinking i'd be really nervous thinking what would happen and yeah who else yeah tracy what do you think i think it would be exciting because you're going in space and most people don't get to go in space that often would you guys want to go in space would you want to go in space chelsea yeah and what would you be thinking right now i'd be thinking

[00:34:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=2042s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=2042s)

right now i'd be thinking um that i hope that the rocket nothing happens to it and i hope that space doesn't affect me because i'm older very good very good thoughts from the place where john glenn himself once sat i don't know if these may be new desks so he may not have been at these very desks but in this very room john glenn uh sat here as we said 60 years ago he now sits on a launch pad down there with you folks we'll all be watching jeff why don't you look under those desks see if you see something carved in there like johnny loves annie or something then you'd know for sure if that was one of the original desks we might find it there all right jeff flock in new concord walter somebody noted that astronaut tom hendricks suggests three reasons why more astronauts have come from ohio than anywhere else that role models such as john glenn and neil armstrong set them all to it ohio schools and the midwestern work ethic well actually i just heard from a fellow who lives right across the board in kentucky who said the other reason is that they'll do anything to get out of ohio and the switchboards are lighting up that's true that's what they used to say about us journalists who left missouri all right walter cronkite uh we'll continue our coverage of course uh of the launch of discovery now planned for 2 pm eastern time as far as we know it's on time no problems to report we're expecting to see the astronauts walking out in their orange suits to that van which will take them up to the launch pad in just a few moments and we will come back and bring that to you as soon as it happens stay with cnn all day long i have coverage throughout the morning here on cnn so stay tuned for that good weather too huh beautiful day absolutely beautiful day and as we move on to showbiz news we're still keeping the theme on space hollywood has a rich history of movies and tv shows about man's adventure in space real and imagined yeah these stories may not compare to john glenn's historic return to space today but they are proof of the power and mystery of space that captures our collective imagination

[00:36:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=2161s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=2161s)

captures our collective imagination cnn's lauren hunter has more in today's showbiz report some of the earliest images on film were of the world beyond our own [Music] in 1902 french filmmaker george melies capitalized on the public's fascination with space in a trip to the moon space is fascinating because it not only provides you with you know contextually a a an exotic environment you know it's almost a science fiction environment but it's got the human drama in it that drama was the basis for award-winning success destination moon won an academy award in 1950 for special effects as did 2001 a space odyssey nearly 20 years later open the pod bay doors hell i'm sorry dave i'm afraid i can't do that the final frontier has also been the backdrop for human the three stooges went into orbit in 1962 following astronaut alan shepard by just one year 15.5 by volume is it okay it's not exactly a tropical paradise penny lost in space provided a 1960s and 90s snapshot of a space family and luke skywalker discovered his lineage in the star wars trilogy this will be a day long remember we're reaching beyond our limits when we go into space we're right on that frontier of what human beings can accomplish and what they can experience all life forms in the galaxy are capable of superior development the popularity of the star trek experience has given birth to five spin-off series and nine films star trek had uh perhaps as its base the mythological thing that we lack it's a universal yearning by all mankind to have a myth and to have a hero sometimes those heroes came directly from the pages of history

00:38:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=2280s)

the right stuff looked at america's first astronauts houston we have a problem while tom hanks portrayed jim lovell in apollo 13 hanks went on to direct the emmy-winning hbo series from the earth to the moon there was a period of time prior to man walking on the moon and then where there's the world after man walked on the moon i am continuously uh and repeatedly and inspired by the whole shebang hollywood got a shebang for the buck this summer with deep impact and armageddon bringing in more than 300 million dollars proving that the box office force continues to be in space lauren hunter cnn los angeles [Music] and with that we tell you morning news continues right now [Music] [Applause] and good morning once again welcome back to cnn morning news i'm daryn kagan and i'm bill hemmer thanks for being with us it's an exciting day today as we continue to watch the countdown to space shuttle discovery right now t-minus three hours and counting and counting all systems are go for the launch in about three hours the shuttle discovery is scheduled to blast off on a nine-day science mission and if you're one of the folks where shuttle launches no longer inspire you this one certainly is different folks on board one of the pioneers of space exploration senator john glenn is returning to space 36 years after becoming the first american to orbit the earth and for the latest on this history-making mission cnn's miles o'brien along with walter cronkite live now from florida fellas good morning again good morning uh darren and bill it's good to see you walter uh you getting goosebumps yet any goosebumps no no not at all cool cucumber just like the astronauts i will be until t minus five okay that's when it starts all right let's bring everybody up to date if we will let's uh the astronauts are currently on their way out to the launch pad 39b they just left not too long ago from the operations and checkout facility there's their motorhome as it approaches the launch

00:40:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=2401s)

motorhome as it approaches the launch pad very close to it near the base of it you see the uh what the steam or the the cryogenic waste coming out of the shop big thing about that picture miles is it gives you a sense of the size of that launch facility out there and the rocket itself that that that pretty good size bus there and look at it it almost disappears as a little tiny net on that wall that launch pad of course originally built to launch saturn five rockets toward the moon a little bit earlier we saw the crew walk out they uh the traditional walkout picture the picture uh you know everybody likes to see the seven-member crew looking good smiling getting a high five or two from some of the nasa employees inside the facility there wearing their orange launch and re-entry suits there goes the high five a little earlier they had a nice breakfast on the menu we're told filet mignon nothing less it used to be just plain old steak and eggs i guess nessa's gone upscale right walter and they uh had eggs bacon uh yogurt cereals whatever they like although when we saw them they weren't eating very much perhaps they weren't loading up on too much this particular morning they don't have to worry however as the mercury as the germany astronauts did about low residue diets indeed they have toilet facilities in the shuttle they didn't have with those earlier flights exactly exactly let's take a look at some of the crowds which have gathered along florida's space coast here today pre estimates in advance of this uh launch were as much as a quarter of a million perhaps as many as 300 000 people lining the causeways and beachways to see this launch to get a little glimpse of history that's what we're seeing from the goodyear blimp as we speak right now somewhere down there i can't make him out right now in the crowd is cnn's mark potter and he's been talking to some people who are here for the show mark well hey miles uh we're here in titusville at an area set up by the uh space center for people to watch this uh launch and uh people right now are just

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launch and uh people right now are just sort of hunkering down uh waiting for the next three hours for the launch they're trying to deal with the sun some paramedics have come on to say that people should be drinking water and just taking care of themselves because this is a very hot sun it's a great day for a launch but it's a little tough on the people out here now folks here have come from all over the united states we also learned that there's a couple here from sydney australia that came here specifically for this launch we're also visiting visiting a gentleman here named gary thompson uh who's here from perryville maryland uh gary tell me mark potter mark potter hey mark can i can i interrupt you let me just interrupt you for one moment if i could we're looking at a um a black and white uh picture i'm not exactly sure what particular camera nasa is providing uh for us right now but if you take a look there that's the seven-member crew uh i i don't think it's uh too much of a reach to say they're probably a bit awestruck at this moment don't you think walter who's awestruck the the seven-member crew looking at the uh shuttle up at that as you say if they're all struck at this late stage of the game we better start over they've been out there that machine a lot practicing this mission well it's an impressive uh site i suppose as many times as you may see it they're taking a look making sure everything looks in order probably uh maybe they're like airline pilots they're going around to see that all the bolts are on the tires are on and ready to go yeah of course you can't kick the tires they're retracted but you can check out those tiles which are an important part of keeping the shuttle safe as it re-enters the earth's atmosphere if all goes to on schedule about nine days from now mark potter i'm sorry i interrupted let's get back to you mark go ahead uh miles we're here at uh titusville uh we're with a group of eight thousand people who have come here to watch this uh uh launched where they're they're hunkered down in the heat uh just waiting for the next three hours for this uh launch to uh to take off and they're they're doing their best it's pretty hot the paramedics have told them to please uh just make sure to drink lots of water

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just make sure to drink lots of water and do the best they can it's a great day for a launch but it's kind of tough on the people here right now we've got people here from all over the united states and we've got uh uh even some people we're told from sydney australia uh who are here they've come here specifically for this launch in this area over around we have 250 to 300 000 people here for this launch this historic mission and uh they say people are saying that the main reason they're here is to see uh john glenn now we do have a guest here gary thompson who's with us in uh from perryville maryland and uh gary tell me why uh why you came here today all right i apologize i'm gonna jump in one more time we're seeing some um well fairly emotional pictures the folks on the closeout crew there hugging each of the crew members as they walk across the gantry and head toward the uh the vehicle which awaits them right now and uh we're joined by a person here sitting beside us who knows a lot about what goes on on these launch pads winter event who spent some time on these this particular launch pad over the years in the apollo missions and prior to that the gemini missions and the mercury missions was the man in the white room who sort of tucked everybody in their capsules as they called them then spaceships today lucha thanks for being with us oh thank you i'd like to be here and especially after that many years yes well tell us uh what are your thoughts today first of all you were there of course when john glenn went the first time around uh what what happened back then yes now when john went it actually was a rather complicated mission because we were starting off to delay it delay it delay it and scope it one time after another and uh at that time you're gonna realize in the early stages we had an average blow up of two or five misses used to blow up and uh we even brought the seven astronauts down one time and show them what an atlas launch looked like and that thing blew up so at that time uh shepard looked at glenn and says you know i hope they fix that thing before we sit on it

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that thing before we sit on it so needless to say we were always worried about having another scrub and uh we did all right on the launch day itself except after i got to go to close the hatch john was in there i leaned in i said okay john you're happy everything the hoses and the cables and everything the restraint straps are right so he give me the thumbs up because with the helmet closed there's not much chance of verbal communications so i give a go ahead to go ahead and close the hatch so we close the hatch and lo behold we broke one of the hatch balls because at that time we had an explosive type hatch release and the hatchboards had to be pre-drilled to break at a certain limit so needless to say now we broke a hatchboard so i told the test conductor sorry we did that and he said okay open the hatch and replace the plate nut and replace the bolt good turn let me just interrupt just briefly here for a moment we're watching commander kurt brown as he struggles somewhat it's a cumbersome process to put on the harness which will attach to his uh parachute on his orange launch and re-entry suit commander brown who hails from north carolina is a graduate of the air force academy flew a-10 attack planes for many years and is now about to go on his fifth mission in space by any stretch a shuttle veteran as he gets his communication gear on go through i have uh in my hand what you brought for us where these boats were just talking about walter uh i'm curious what you remember about the delays and the bolt problems and everything else related to john glenn's first flight yeah we knew the gunner was there at the that the face off as it were right there the hatchboard had a interesting tradition because uh mr matt the owner of mcdonald aircraft at that time who was a scotchman and he found out he got 22 minutes of free tv airtime because all the tv showed was mcdonald aircraft on the back of our technicians so after the flight he requested that he gets the ball to gold plated and

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gets the ball to gold plated and displayed in saint louis because he got something for free from the tv network so john yardley at that time asked me to go ahead and provide him this bolt so i gave him the bolt and he said you know it appears to me that only one individual knows if i got the real one now i said okay john you have the bolt and i have a similar one and he's right it's only one individual who knows who has a real one and that one isn't talking how good do we believe you you know these uh the precision with which these things have to be made it's like making the airplanes a lot of other things but you can imagine now that looks just about like a bold i'd go down and buy at the corner hardware store and it probably cost a couple of thousand dollars yes see we had the problem we had a shaped charge underneath the hatch to open it rapidly and that means all the bolts had to break at the predetermined time and even when they manufactured them we had found out in proof testing that two out of 100 would break at the nominal toilet and we hoped it wouldn't happen to us but it did happen to us so we had to wait 22 minutes so we said okay now here again john goodbye and uh good luck gutter you're the one man in the world who knows the answer to a question i've had in my mind for a very long time i think i know the answer to this but i'd like to have some confirmation when that when the countdown is interrupted sometimes within seconds of launch the astronaut has been through all the training he's ready to go he's lying there in the couch ready to go now it's over he knows he's going to have to climb out start all over again some other day doesn't know how long the day will be you open that hatch yes what's the first word he says to you now i think it depends who it is now john would be very careful what he said except that i have a picture here you can see that he wasn't too happy about it and when the control room saw that picture after he got out they said can't you make him smile i mean that's a bad publicity so if you flip the page you see what i did to john to make him smile

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did to john to make him smile i'll tell you what gunter before we look at that i just want to tell folks at home what we're seeing this is a camera which is mounted on the left side of the flight deck of the space shuttle discovery and that camera is giving you it kind of looks like you want to turn your head on that one's to the uh cockeyed but basically what that's showing you is the left seat commander kurt brown being strapped into his seat aboard the space shuttle it's obviously a tricky proposition because the vehicle is standing on its end and the uh technicians as well as the astronauts as they get on board have to be very careful that they don't step on a switch and break a switch gunter it's it's delicate procedure isn't it it's not just only that as a matter of fact during the apollo days uh jim lovell see we used to strap him in relatively tight because we are always worried what happened when the engines cut off because they are seeing three g's and that time and when the engines come off you fly forward now after we closed the hatch and we had left jim lovell plowed a build a fast one he loosened some of his straps and later on he told me he said after his head hit the hit the dashboard when the engines cut off he knew why we put the straps on that tire now that was the thing that he uh going back to the original one was john let's take a look at this picture by the way this is a picture which was shot by nasa and gunter brought that for us and said the the uh caption at the bottom there scrubbed again i don't see the date here right this moment but he looks a little frustrated there he was very frustrated because you know he's been laying on his back for four four and a half hours so the control room says you know that looks bad on publicity on tv can't you make him smile so i said all right i'll do that for you and that one too we substituted that picture there for what john looks like after we scrub it takes a little effort but uh he was very careful now if you talk about pete conrad or uh some of the other astronauts when we scrub they'll come and uh sometimes i think

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they'll come and uh sometimes i think would be bleeped out because you need to understand hours and hours of pre-test operations and all that yes you know and then you scrub again and with many of them after they thought about it for two or three days they were still having to be bleeped out it wasn't just an immediate reaction to many of them john lay at the top of that uh at that little uh that that was uh for four and a half hours once six hours another time i know and then there were ten other scrubs of his mission when he wasn't at the top of the match was a very primitive spacecraft on today's worlds as a matter of fact uh let me let me just interrupt briefly here this is shocky makai and where you are right now once again kind of difficult to orient yourself here you're on the mid-deck what they call the mid-deck is uh what you might call the lower deck of the shuttle there's a lower deck which isn't uh inhabited it's for storage in any case we're in the right-hand side of the orbiter and that is shiaki mukai who will be sitting to the right in the middle uh at this flight deck level back to commander kurt brown but uh when we go back down to the mid deck uh john glenn will be in the middle seat i'm sorry go ahead now if you'd like to be a little bit on the humeral side we had scott carpenter in once for a test fully suited for many hours on end and he upset the medical people in the blog house tremendously because every once in a while you heard a sound like oh oh and they stood on their chairs and they didn't know scott what is wrong what is wrong and finally i mean they really bugged him and he said i'll tell you what's wrong that's the last time i go to the heidelberg in cocoa beach and have sauerkraut beans and beer what happened is in the olden days the suit system was a recirculating system which removed two co2 but not other gases so he had to come back every few minutes he nearly he nearly died a vehicle he started taking his own medicine wasn't it so he found out you don't do that in spacesuits that's a hard way to learn what else did you what else did you bring you have seen the thing and uh turn

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you have seen the thing and uh turn around show that that's uh gunther that that's an old uh life magazine that's actually this month oh that's this month okay it's life magazine that's a time when john was in for a test flight and ralph morse was a photographer at that time he took some of those pictures and it shows you how narrow the patch is look at the comparison here in our split screen there's john glenn going in 36 years ago that was commander kurt brown today a little different type of scene but really in many ways things haven't changed much have they gone through oh yeah but they have much more breathing room you didn't understand john couldn't stretch out he couldn't straighten out his legs or anything like that now he can walk in there you know and yeah the the the the actual term that i think you use gunter in those days was you inserted the astronaut in the capsule that's what you were doing it was use the joke we said we put them in with the shoe horn and take a can opener to get them out but this was very very tight and you need to understand when you lay on your back in a capsule with your feet elevated all the blood conceals in your lower part of the body and five hours of that was rather tricky but we did run some tests which i don't think have had ever much publicity and think louise one time i found out how we developed the spacecraft couch for the astronauts and what we did is we in order to cushion the impact on landing we used pigs to drop test them and see how they would react because the intestines of pigs are similar to the human being so what's interesting when you go to a factory and find a little pig form there somewhere in the corner called for the sake of science tell us what else you have here this is an interesting little one thing is when they were talking about the good old days the good old days were really days with 14 16 hour work days and maybe three four weeks without a day off and vacation or even a day off so i talked to john about it and we thought about what could we do for the lounge co

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for the lounge co to reward him i asked them if you would take some dollar bills along you know sign them and then bring them back after the flight so we did that and we took uh 52 dollar bills and that's one of those let's try to get a shot of that uh dollar bill if we can and i've pointed over to this camera here gunter for you i don't know if you look at it closely enough i don't know if you can get in on it close enough there andy but uh on the left-hand side of that bill uh there is a signature there and it says uh j.h glenn jr john herschel glenn jr certified to have uh made three orbits right right and so there are two things out here today that have been uh that went up in the 36 years ago john glenn and this dollar right and as bills matter of fact that caused a lot of commotion because some congressional inquiry wanted to know if we had floating dollar bills in the spacecraft so i finally uh i had to explain to them how we put these things in you know we rolled them like a little spaghetti put them in thermoshrink tubing run the tubing through the altitude chamber run them for two days and 100 oxygen atmosphere to make sure nothing could happen and then we installed them with a legal piece of paper like a wire bundle but they said oh yeah they had floating dollar bills none of that happened all right that's the man who sits in the right-hand seat beside commander kurt brown steve lindsey steve lindsey is also an air force colonel uh he flies uh f-16s or has flown f-16s and uh he's the one who feels very strongly that this is a an important first step toward bringing the rest of us into space and uh that this will somehow spur along a lot of conversation to that line go into looking at the uh the suit taxes they call them there uh they take their job very seriously nevertheless uh you want to have uh some camaraderie with the astronauts don't you and you want to keep it fairly light up there don't you yes now there's a great difference between the interface between the astronauts now and as it was then in the early mercury germany days the

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in the early mercury germany days the astronauts used to go to the factory see their spacecraft being built they participated in every test we had and they spent ungodly hours out there with us now today the flight crews and even the closeout crews see the astronauts one time in a major cdt and a countdown demonstration test and then they see them for lounge there's not that same interface like we used to have for hours hours and months and on end so that's quite a difference in it because uh they used to live with us and they used to take the same paints that we had having ungodly hours to work well you know walter uh it takes me back to the discussion which was very prevalent at that time about what proper role the man had in the space program you know should he be just a passenger should he be an active pilot should he also be involved in the engineering nasa chose really the latter an active pilot and engineer i think the russians went the other way didn't they yeah well the the big uh the big line here in all those early days was man in the loop the whole question of how important was man in the loop in other words man in the spacecraft we set some pansies up after all right they weren't too happy with the ride but there's a wonderful chimp called ham and we had the first trip he had a handler here and they were dear friends to him and they sent uh set him up on his horrible flight he came back ham came back then parachuted down they got him out of the spacecraft they as they opened the hatch cutter would be familiar with this they opened the hatch the first thing ham did was bite his handler he was a darn bit happy with that little flight that that takes anymore but they all but the whole question was just how important was man in the booth we really were almost at that point at a point of decision as to whether we went with man in space or we went robotic and and and how much did would the man

[01:00:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=3602s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=3602s)

and and and how much did would the man have to do the astronauts were very much concerned that they were being inserted in the spacecraft that would then be operated automatically and they'd just be testing whether man could survive what they wanted to test was man flying that machine and it turned out that on that very first mission and glenn he had to fly he he wanted to turn around and check things and he did on his own and he established right away that man needed to be in the loop spam in a can was the thing that they were calling it and of course he got up there and his uh automatic control system failed him and he had to control himself as a matter of fact came down into the atmosphere controlling it manually which must have been some feat yeah now that was one of our walls we had because uh as a matter of fact there's a little story that we had with john before he ever flew and that was uh we had a group of young people in cocoa beach at the church at presbyterian church and they wanted to talk about the space program so i volunteered to go there and ask john if he would go along at that time he wasn't that well known so he said yeah i go along and so i explained to the group that our problem is if we don't re-enter correctly we bounce off the earth's atmosphere and we never see john again and i said now what do you focusing should we scrub the program if he doesn't come back alive and one young fellow said oh that's really no problem he says just take another one you got seven so i looked at john i said you know why don't we ask one of the seven how he feels about it i think he was a little red-faced probably at that moment yes yes but the boy he covered really quick like he says there's a hole i can climb into but john explained that that yes there's a risk you're taking and it's worth taking because he said we want to follow the space program let's uh tell folks what's going on right here this is steve lindsey right side of the orbiter front seat pilot uh and he is uh it's quite a bit of gyrations they have to go through to get in these uh orbiters and as you say while they had uh certainly more space uh have more space currently than they

[01:02:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=3720s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=3720s)

uh have more space currently than they did in the mercury days it's it's still uh quite a contortionist performance getting them inside here miles you and i uh did a simulated flight with the in houston a couple of weeks ago and we were just in our normal street clothes no jackets nothing of the kind not not this cumbersome suit and it was a devil of a job to get across all those and that instrumentation and all that machinery and back into that seat it uh i had both legs tangled up i thought my right leg was my left leg there for a while and it might have been that uh it's a tough job there's a great difference between today's suit and john glenn's suit see when john glenn flew he didn't have to carry a parachute on his back he didn't have to carry the recovery gear on this back because we had a capsule we could pull away from the booster see today they have to carry the thing and that's where all the volcanoes comes in they have the parachute they lay on and there's on the back and they have the other survival gear that they have to fly with and that all adds to it the complexity to go ahead put them in the seats as there's so much room and so many straps and so many cables and so many hoses that it's not an easy task to get there 83 pounds in all it weighs from uh helmet down to boots and uh it does it's obviously orange for visibility should they ever have to bail out over the ocean and uh there's a raft that is including all that a parachute of course as well uh it's worth pointing out here that uh right uh up at the challenger explosion the astronauts were walking out in essentially just flight suits uh shirt sleeve kind of uh set up uh nasa at the time was trying to uh convince the rest of the world the shuttle operated as efficiently as an airliner and the challenger astronauts were not wearing suits like these this was one of the major recommendations after the challenger accident that they wear the pressure suits the full pressure suits which were worn on the early shuttle missions uh certainly the first shuttle mission which you covered walter

[01:04:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=3841s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=3841s)

go into um go ahead walter i'm curious um the the previous suit here these were all custom-made these are more of an off-the-rack affair um the the expense is of course an issue as well that these things were really like uh well form-fitting and in addition to that so were the seats weren't they yes we had actually made form-fitting couches for each astronaut what they did in saint glue is they just had the astronaut just we want to bend over go in the configuration then we made a plaster of carrots mold of it and then we built fiberglass seeds and by the way we also built fiberglass seats for the two chimpanzees for ham and inus and uh but they were actually molded if you look at the book if you want to know what the old couch looked like i think there's a picture in there i don't know if you want to look at it or not well actually we can do that after a break because we do have to take a break gentlemen our local cable stations do have to get some commercials in here for just a moment we are going to take a brief break we promise we will be back in time to see john glenn as he gets strapped into his seat on the mid deck of the space shuttle discovery with the clock counting down at 2 hours 12 minutes and 12 seconds this is cnn stay with us there there was a there was a three-part selection the uh uh glenn and uh and uh uh alan and uh who was the thing i think cooper was the other one but uh they yeah they were the three top guys and there was actually a picture in time life magazine to the three out of whom one would be going i think they got it down to that yes it was now it was very very competitive i mean you need to understand everybody was fighting for a seat in the spacecraft and i think that went on all through the program you had a fight to get a seat there were always more people or more astronauts and there were seats yeah so it was a constant fight do better than the other guy that was a

[01:06:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=3960s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=3960s)

better than the other guy that was a tough job running that astronaut office down in houston having to make the ultimate decision and announcing it to the to the men who were your colleagues your friends you've been through training with you suddenly had to say you're not going you i think dick slayton had a great hand in that and somebody else said you know if you get on the bad side of d don't ever expect to fly he's the late great league slate and of course one of the original uh mercury seven who uh did not fly until apollo soyuz but uh who was very instrumental in the selection process all along and universally respected by the astronauts was he not he was he was very much respected by it but it was it was a tough thing the competition was very very great and uh i think it even is today you have to excel in whatever you are assigned to do be a payroll specialist or business and you have to fight for your seat because like you know today we got about 180 astronauts the one thing you have to remember is that these men were all military pilots and they and they had learned something a military discipline chain of command they understood they understood the necessity of somebody making decisions and enforcing them and uh while they all fought for a seat there weren't many complaints except privately that they didn't make it they they didn't complain to the boss himself i don't think that was very interesting i mean the competitiveness and like you say you compare things today and they were then i remember one time the famous restaurant here ramones we were testing late in the evening and the guys wanted to go home and i asked them would you be happy with ham and cheese sandwiches and they said yes so i ordered a hundred sandwiches and then two ounce of coffee to pick up at the south gate to bring in at that time i could sign a slip you know mcdonald had a i had enough petty cash to go around now today you couldn't do that anymore they wouldn't even let them in the gate but they were what they call the old times but we enjoyed it now i just had a thought today walden they're saying okay watch the young people you know i like to work with young people what's in it for us and i always like to compare two things

[01:08:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4081s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4081s)

and i always like to compare two things i said you need to understand if you look back in the past and you can't live in the past we our generation we developed a model t ford i said why don't you guys go ahead and develop a corvette and that would be uh besides it if you look for security look at this way be an astronaut and you got a 40-year job look at john all right we need to take a break the corvette is fueled and ready the occupants are getting inside as we speak steve lindsey on the right-hand seat there we're going to take a brief break we promise we will give you the entry into the space shuttle discovery of john glenn when we return stay with cnn all right those suit technicians helping with the fit on that suit uh it's basically a rubber suit uh with uh and they're adjusting uh listen to rick launch an entry suit here there's a suit uh making sure the parachute harnesses are up you can see the blue pad behind the harness for comfort and you just saw them put in a couple of silent sticks into his suit we talked about those before for visibility harness that's not actually the pair he's pretty happy and the parachute is actually already on the seat and they strap themselves in and a five-point restraint once they get inside you can see the neck rings right now you've got those two little orange tabs with the white elastic bands coming out and they're just velcro tabs that will come out because this is a pressure suit you really have a tight fit around your neck it's like a neoprene turtleneck uh almost like a surf suit that goes around your neck and those bands actually will pull that out away from your neck uh when you're not configured with a helmet on to give you a little more comfort and allow more air exchange inside the suit it helps go ahead okay this suit's quite a bit different than the first suit that he wore back 36 years ago that was yeah silver

[01:10:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4201s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4201s)

back 36 years ago that was yeah silver suit yeah but that silver suit is classic i mean when you think about uh when you think about spacemen and spacesuits and all that you think to the early days and you think about the the early suits of mercury and apollo suits that they wore and it's amazing the technology and how far it's come in terms of the suits but yet the amazing thing is that the technology back then is that they came up with that in a very short period of time and it worked and it worked well um and so they were able to build in that technology over the years and you know much of that technology that we have from the military and nasa has been applied today in suits such as this in a lot of different areas of uh saying fire rescue emt things like that and so nasa technology has trickled down a lot of ways you don't really think about and one of those ways would be the spacesuit yes good job you had a point go ahead i tend to think though and that's when you're in space to put the eba suit on with all the connections and so on because that is a really cumbersome suit even in weightlessness that floats but just getting in and getting it on it's even very very tricky that's in essence a form-fitting spaceship i think it's got all of the uh all right you have to have everything listed equipment as a matter of fact i'm frequently asked you know what if they are on eba and they have to use the bathroom have you ever asked the question do you know what happened we've all heard that question yes everybody asked that question about astronauts okay yes i mean that used to be in the early days in apollo why didn't we have a female astronaut you know and we simply answered was we couldn't come up with a human collection system for the female astronauts right now these astronauts actually on ebay they wear pandas and uh even now something linenham said just a moment ago there as we watch this he said something reminded me of how long ago february 1962 was when glenn made his first flight i'm looking through my notes i found this explanation of the material

[01:12:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4321s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4321s)

i found this explanation of the material that covered the inside of the hatch okay this is a quote this is what i said on the air it's an ingenious kind of material thousands of tiny loops various things that glenn must handle camera notebook things like that have a piece of material on them that is really thousands of tiny hooks he just has to put his camera against the hatch and it stays there the hooks engage the loops it probably wouldn't work on earth probably wouldn't work on earth but in the weightlessness of space this stuff keeps things from floating around the capsule talking about belt and that was just 36 years ago i knew it probably wouldn't work on earth that's why i didn't invest in it walter he said about the stock right then and there no that was that was a great thing we were actually we were learning as we went along and we we made many mistakes but nobody knew just like we were talking about man or machine and we had to make provisions to have a machine which could do it in case a man couldn't do it so we actually designed a dual machine you know go automatic or go with men because remember what they were talking about that the eyeballs would fly out and he couldn't lift his arms or he couldn't do anything and then we had to find out step by step what he made that first flight of glenn's the dramatic fight it was we didn't know what was going to happen to him up there the russians had had a couple of people up in orbit but they weren't sharing their information with us we didn't know what they were like when they got there plus the russians used them more or less as passengers they never had them control anything you know in the beginning you know it's probably worth pointing out here and maybe we can get somebody to bring the models on the set here for just a moment but let's compare the two spacecraft for a moment if you will the difference uh is quite quite staggering isn't it uh in in size it is uh there was 36 cubic feet of size inside that mercury capsule now what we have on the set here is a model which shows the space shuttle

[01:14:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4442s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4442s)

is a model which shows the space shuttle uh with its uh external fuel tank and its solid rocket boosters beside a mercury capsule sitting on top an atlas rocket and these two things are the same scale and i think as you can see over here the mercury atlas stack would uh you could probably almost fit one and a half inside that solid rocket booster well then the power of this thing compared to this this was seven million pounds of thrust yes this was what thirty six thousand wouldn't it yeah three hundred sixty thousand sixty yeah yeah so big thrust differences and then the the key i suppose that the big difference that john glenn is gonna feel besides that punch of acceleration he's gonna feel uh presumably if the launch goes on schedule is the the space he had 36 cubic feet of the mercury capsule and more than 2 000 cubic feet to float around in the space shuttle it's a big difference he never really got the feel and if you put the redstone here that's even smaller a little firecracker that took the shepherd carpenter on it would be about life yeah and that said and plus in other factors you've got to understand in glenwind he experienced as much as 7gs now we are limited to 3g so they don't even get that much stress as they used to do in the olden days and i remember whenever you wanted to do something in the mercury spacecraft you had to lean into the hatch and most of the stuff was underneath the seat or some place where you couldn't get to it it was rather complicated to even get equipment in at these times so it was a really tight fit well you know is it is it time to repeat shimmy oh yeah no you go ahead walter the time to repeat the story that i have uh often told that shiraz told me when i asked him once after his flight i said come on you guys get back and at the white house and all these appearances you're making now you you you tell about your confidence in this craft that you went up in come on wally now that we're having a beer here together tell me what what you were really thinking when you were lying

[01:16:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4560s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4560s)

were really thinking when you were lying there on that couch about to be blasted off of this little locket and while he said you promise you won't ever tell anybody this so i can't tell you i'm sorry [Laughter] no no time enough has passed i'll tell you he said well you know what i really thought he said i looked at all those switches and those those knobs those things to turn and turn on and off i thought to myself my gosh just think this thing was built by the lowest bidder i know that that was that was a story they always gave us you know built by the lowest bidder but you know one interesting thing too while it was like in the mercury spacecraft if you got the signal that the range officer was gonna distract the booster you had manually to eject yourself i mean the capsule from there and you had to throw seven switches and it always was an interesting thing who was the fastest to throw these switches in the right sequence so one day i practiced it too and i did a really neat job except the moment i had the escape rocket take us off i discounted the parachute which was a little detrimental to recovery so no so but shepard was a pastor speaking a man in the loop and speaking of wally sharon uh he had the occasion with germany oh yeah that shut down the last second right on the pad yeah and he handled that for me perfectly exactly what he should have done at that moment he did and that is it could have been faithful i know that is that is where the training comes in you know where you really know what you're doing he was listening as a matter of fact is there anything going on is this thing breaking up as a catching fire and so on while he had hands on the escape handler all right gentlemen i'm sorry we got to take a break right now uh you're looking at scott perezinski in the white room getting ready to uh have his appointment with the suit technicians john glenn is uh pretty well tucked away just about

[01:18:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4680s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4680s)

tucked away just about complete on that we're going to continue our extensive coverage of the launch of discovery in just a moment stay with cnn [Music] [Applause] back live for coverage at the kennedy space center a picture-perfect blue sky a gentle light breeze the american flag flying it flying beneath it the flag of the space shuttle discovery to the right the countdown clock one hour 48 minutes 54 seconds and counting we do expect two more holds uh this afternoon before we uh have an expected launch at 2 p.m there'll be a hold at 20 minutes uh that will be a 10-minute hold then there'll be a hold at nine minutes which will also be a ten minute hold and there is also a possibility of another hold relating to a problem with a sensor we can get into that a little bit more later not a real problem whatsoever just a little work around for nasa the bottom line these holds give everybody an opportunity to stay on schedule as they continue toward the launch of discovery john glenn aboard walter cronkite gunter wendt who spent years and years in the white rooms of these launch stanchions all all along the coast here all the way down cape canaveral joining us and we're watching the crew come aboard it's amazing how smoothly things have run walter compared to 36 years ago big difference huh yep by this time we would have had a couple of scrubs anyway yes we at the lounge but actually the 11th attempt that we made you know from scheduling but uh see john was also the guy who gave me the name as a pat fuhrer have you ever heard that it worked he said i resembled somebody that he knew from history that was somewhat dictatorial and i never thought i was dictatorial i told john i said i'm not a dictator just do what i tell you you have no problem and then later on pete conrad asked once he explained to neil armstrong how to

[01:20:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4801s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4801s)

he explained to neil armstrong how to get along with me he says just do what he tells you and you have no problem and neil says oh what can he do for your soul switch peter no nothing he steps on your fingers were you one of the pina mundo no i was a little bit too young for that i knew about him you know but i came over in 49 and the first five years i couldn't even work in aerospace because i wasn't a citizen yeah and uh but then after that i hired in at mcdonald's and then later on got into the mercury program right away that was very enjoyable but uh did you ever talk about that so remember mark williams used to be the nasa chief engineer and it's called that story yeah right have you ever heard that story i mentioned your dad walden we have told you about it one day we were on the pad and shepard was there with this uh grissom yeah and the roy williams had a press conference and he didn't have a car so he very bravely said to while he said oh go ahead and take my corvette and roy says you don't mind do you they said no no go ahead take it so here roy goes down jumps in the corvette and allen's i always watching me stood up the window he picked up the phone he called security he says hey some sob just took my car from the pad he's heading for the south gate now when he when william showed up at the south gate four husky guys didn't even ask the question they pulled him out of this corvette a long story short the williams didn't talk to a shepherd for four weeks all right let's look let's listen into the comp checks on board discovery as they check out their communications gear for just a moment that's a great shot you can see uh that to ms2 scott is positioning himself this is a great shot because it shows all of them and you're looking straight down scott sits between uh the plt and the cdr the pilot commander as the flight engineer ms2

[01:22:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4922s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=4922s)

as the flight engineer ms2 and this is a very demanding position scott in addition to his payload duties and his medical duties had to train and study very long and hard to acquire the knowledge and skills that he needs to function as the ms2 flight engineer because he in some ways needs to know uh as much as both the pilot and commander in some ways together because he monitors everything from the back and actually watches what they do and uh kind of as a as a reminder guy to them about uh different procedures that will need to be accomplished and uh and just to orient you folks that that camera is mounted right on the center of the cockpit and facing right down and scott perezinski the flight engineer we're back down to the mid deck now in the foreground jackie mukai in the middle senator john glenn in the far uh end of the picture there the man they call juan glenn pedro duque all of them getting strapped in and the suit techs hovering around them hooking them up properly and i need to correct something i misspoke earlier the parachutes are actually included on that harness they're not on the seat as we had reported earlier just to clarify that point in the interest of accuracy you know you have mentioned it several times before but i think it's worth mentioning again now that we see that picture uh they might as well uh be locked into a a hotel room somewhere as far as senators uh the flight just uh when they launched that police they're cinched down properly well it's interesting his watch put on his wrists getting all his personal equipment done the way he wants it they have no windows in the in the mid-flight deck there that they can see out of them launch their their they might what they really feel like more than anything is being in the locker room of some athletic club yes once once they are in orbit they can get up and they have the window at the hatch

01:24:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5040s)

have the window at the hatch but that's about the only thing but while you have been in the spacecraft and i remember when we did the approaching landing test on the shuttle i once counted switches and i found out if you are in the commander's seat and that was one of the design requirements you would have to be able to yes that's all that you had to be able while you were strapped in to operate oh i see or read well let's go through some of the comparisons here friendship seven the mercury capsule which took john glenn and orbit 36 years ago had 143 display components in the cockpit discovery has a total winter of 2312. complicated machine friendship 7 had 56 toggle switches discovery 856. friendship seven eight push button switches discovery 219. friendship seven with 19 event indicators discovery 559 event indicators that's a lot of events in space isn't it i think you learn real quick like is that you learn to if you're a pilot to scan all the instruments in a certain fashion normally you go from left to right and you know when you fly you your scan and see what all is there and it was always a battle when i went to downey when we built shuttle and so on i always complained i said i don't like digital indicators because it takes another brain action to interpret precisely i always like the indicators that show you a position you can look at it if the point is like this you want to see an arrow up there analog gauges versus digital digital you always have to interpret your brain needs extra time to do that you know i found that out in sailing on the boat i try desperately these days to get an analog clock-like face instead instead of the digital you're right the digital you've got to focus on and register that number with the arrow you look at it you know instantly that's six feet or eight

01:26:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5160s)

instantly that's six feet or eight or ten feet or 140 or whatever you know it's a it's a much different business all right it is time for us to take a break good job it was such a pleasure having you here with us we're going to say goodbye to you now we know you have a busy day i'll see you another 10 years from now right great cnn's continuing coverage for the launch of discovery will continue in just a moment please stay with us my little thing [Music] [Applause] back live at the kennedy space center you're looking at the mid deck of the space shuttle discovery shiaki mukai in the foreground john glenn in the middle pedro duque in the background there two suit technicians contractors and or nasa employees helping them get into their suits check out their communications gear make sure they're comfortable buttoned in and ready for orbit i'm joined here by walter cronkite we've been talking all day about then and now and the differences and the the space on board this uh shuttle is truly remarkable compared to as you put it the insertion of an astronaut some 36 years ago big difference inserting them which they did they've slid them through that little tiny hatch and right into the seat that's been built for them insertion hardly they didn't walk in like they do today not for the uh claustrophobic certainly all right we're joined by a another guest uh this afternoon dave wolfe who is a nasa astronaut great to see you dave dave uh yeah he had to insert himself in the mirror he spent four and a half million months on the russian space station mayor he's back firmly on terra firma and joining us to help us talk about how they're getting ready for launch dave great to have you here so far so good everything seems to be going smoothly we should have said ross fitchy of course or pass the cam purge maybe i don't know which but how uh how are things going from your

01:28:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5280s)

how uh how are things going from your view of things i don't think we could have a smoother launch count the weather's essentially perfect this is as good as it gets let's just uh keep our finger across it stays good to a two o'clock on time launch you know it's uh it's actually um i don't know i don't know the statistics you tell me is it how unusual is it to have a perfectly flawless countdown well actually we've had on the if you look at the paper things like oh a light bulb or something that's not important a few ground pieces of equipment that have showed minor errors it's not absolutely 100 flawless nothing of any concern toward the launch whatsoever but this is as good as it gets i'd say one in three is this clean really that's that's pretty remarkable now we're looking at a shot here fingers crossed we're striving for 100 now uh this is just exceptionally good hard to beat and now this shot right here which is coming at you from the top of the cockpit looking down to the right we have commander kurt brown to the left of your screen pilot steve lindsey right in the middle scott perezinski the flight engineer sitting beside him is steve robinson who now we know we were just talking a few moments ago about scott perezinski's role as the flight engineer critical role monitoring systems he can see a lot of instruments that the pilot and the commander cannot what will steve robinson be doing on the asset on the assets steve robinson will be he has a good view of the three crts cathode ray tubes essentially display units that are in front of the three people you see very clearly there uh the main crts on the instruments he'll be monitoring systems he has his own eye trained on particular parameters such as is the purge helium that clears the explosive gases from the seals in the main engine so they don't back up into the engine is that pressure maintained that's very critical and he'll have his eye on parameters such as that as we look at that suit technician though it's high we once again have to orient ourselves it's like being in a fun house or something but the bottom line is the suit technician is standing

01:30:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5401s)

line is the suit technician is standing on what would be an instrument panel right which would be normally upright what do they do to protect those instruments dave uh that's right there's a set of platforms and now that's an ascent support person and i can't see who it is here but likely one of our astronauts two of them would be helping at this point in time but there's a set of panels made to fit that part of the cockpit now it looks like the floor we're looking straight down but really that's the back wall of the cockpit looking back into the payload bay of the orbiter now those doors of the payload bay will open almost immediately upon getting into orbit all right now we're gonna break away from our anchor position for a moment because john zarella is somewhere on the compound with a couple of people who have some uh interesting demonstrations for us spacesuits then and now we'll call it john that's right miles we're just talking about the closeout crew and we have here with us ray villalobos and ray is one of the members of the closeout crew and ray you've got the modern day space suit on here this is what the astros launch and re-entry suit they'd be wearing today with that helmet correct correct this is the suit that jungling will be flying today we were a little concerned about how hot you'd be out here in this you're okay i'm very well very comfortable now i want to break away just for a second and give you a look at what this is the suit this is a test suit that gus grissom would have worn about 38 years ago and stephanie walker is here stephanie you design spacesuits the old and the new and your job is to make sure we keep up with the latest trends and the development of suits that's right we work at johnson space center i work with ray on the development of the launch and entry suits i also work with the group that does the eva space suits or the white space suit uh we're all in the same group what have been some of the major innovations besides color in the last 38 years well the first thing you notice is of course the color the old suit was an aluminum coated nylon and rubber suit and that was so that the heat from re-entry reflected away from the body we now are going to an a bright orange suit because the suit is primarily a uh emergency rescue suit so if the

01:32:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5522s)

a uh emergency rescue suit so if the crew should have to uh bail out of the shuttle that's bright orange shows up very well out in the ocean and it also has all the survival gear incorporated into the suit instead of in a separate pack so they can't actually parachute out and survive on their own so everything is all self-contained as opposed to what they used to have to go through right so john glenn would probably be a lot more comfortable in the suit he's in today than the one he would have worn 38 years ago or no um yes in some ways and no in others the safety is improved but the old mercury suits were custom made for the astronauts they're built specifically their dimensions and john even mentioned that if you gained weight or lost weight or built up muscles they had to rebuild the suit because of it we no longer custom make suits we have 12 sizes and we adjust the suit to fit the crew members we can take up their arms and legs within those sizes want to thank both of you very much for taking time i know ray wanted to chat with you are a member of the closeout crew a lot of times ray would be out there miles actually the last man to see the astronauts before they close the door that's ray's job out at the pad this john zarrella reporting live back to you miles all right thank you very much john we appreciate that little demonstration we're back up at the closeout room the white room and it looks like they're getting ready dave wolf tell me what they're doing there right now looks like they're taking some kind of seal off i don't know maybe you missed it but nevertheless they're getting ready the preparation is getting underway for closing the hatch how soon will that that's right those technicians are standing in the white room they're preparing the door will close they have to make sure there are no loose objects in this area that the seal around that hatch is perfectly clean there's an o-ring there a red o-ring going all the way around that has to be absolutely airtight of course once we're in orbit this whole white room will retract in the 10 minutes or so 20 minutes before the launch we'll hear that later and it will undergo a lot of stress we have to make sure no objects can come loose in there so uh you know folks it's like a jet way sort of shuttle exactly well put all right let's go

[01:34:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5641s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5641s)

exactly well put all right let's go let's go to the world wide web if we can for a moment cnn.com glenn is a great place to stay up to date on this launch and learn more about it uh one of the things we have on here are these ipex pictures take a look at this dave this and walter this is a 360 degree view of the uh cockpit this is actually a shuttle simulator in houston where this was shot you can look up you can look down and you can look around and walter we we had a little simulator run not too long ago it's a pretty impressive piece of machinery isn't it no indeed it is you can't believe the complexity of it of course the number of switches the number of readouts and the monetary equipment it's baffling that anybody can master it to the degree that they can respond to an emergency situation let alone let alone fly the thing flying it to a landing is something uh isn't they they they come down at a 20 degree angle as opposed to that's right twice as steep as the steepest jet approaches and the fastest landing aircraft that there is or glider particularly but it takes a whole team as you say no one person really can master every bit of the orbiter and the payloads and that's why we fly seven person teams and there's this is a world of specialty now to some degree and it would be uh i think we'd be their elective we didn't mention that that in front of every space station including the pilot and the command pilot there is a whole book of instructions as to what to do in case of of emergency turn to very quickly uh the instructions in case you slip a cog at the mall at right moment now the international space station raises this to even further degree it's a much bigger yet with even more systems and payloads to operate and less time to train per unit time in flight so we have to overcome that through training on board we're back in the right white room right now as they continue their final preparations and i do want to show folks the mid deck uh on that same technology that ipex 360

[01:36:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5761s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5761s)

uh on that same technology that ipex 360 degrees this is the view that john glenn will see on his ride uphill as astronauts call it nothing but a bunch of lockers right dave well it may look that way in this picture but in the real orbiter those lockers are replaced by scientific experiments very complex gear inside them is the essentials of both living and conducting the research on board and as you can see that his seat would be right in the middle there right about where that looks like a stool or some part of a seat is and you can come on to cnn.com glenn and find your way to this ipex image and take your own self-guided tour of the space shuttle the flight deck and the mid deck let's go back to some live pictures of what's going on on launch pad 39b and before we do that however we're going to uh take a quick break here as we continue our coverage of the launch of discovery we are now coming down one hour 28 minutes 17 seconds to launch stay with us [Music] john glenn's return to space is brought to you by lockheed martin the company that takes the most amazing ideas about the future and makes them fly and by quality care fall value days now at participating ford and lincoln mercury dealers it is now about an hour and 45 minutes to launch you're looking at the scene from high above the goodyear blimp orbiting at a safe distance around the kennedy space center we're told about 12 miles away that's about how much airspace they clear off for this aircraft the space shuttle discovery scheduled now for liftoff in less than an hour and 45 minutes and providing our coverage from above is the blimp stars and stripes at the controls

[01:38:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5881s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=5881s)

stars and stripes at the controls captain jim maloney from vienna virginia this year is good year is celebrating its 100 year anniversary and 72 year anniversary for its blimp fleet there is the stars and tribes an appropriate name for a blimp on a day like today i should say mark potter is somewhere beneath the goodyear blimp right now with the the group on the beach ready to see the show hello mark hello myles well we are in a sea of people 8 000 people to be specific here in titusville everyone is just waiting quietly people are hunkered down now the excitement of early this morning has settled down a bit people are just waiting for the launch at uh at two o'clock the the main thing they're having to deal with here right now is the heat it's a very hot day and everyone is just doing what they can to keep cool umbrellas are precious commodities as you can see here in this area right now which looks like a beach head actually it is sort of one we're on the bank of the indian river about 10 miles from the launch pad area and surprisingly 10 miles away we can still see the pad we can certainly see the vehicle assembly building it's going to be quite a show here and everyone knows that and they're just waiting uh for the next for the time to pass so that they can watch it and uh we're being kept apprised here uh by a loudspeaker system over the hill of exactly how things are going so people know uh where we stand and how much more time we have to go now people are here from all over the country and uh uh in fact we met a couple here from sydney australia they came here just uh for this launch uh some of the people who are here from this country include gary thompson gary we tried to talk to you earlier but we were interrupted by the astronauts you came all the way from perryville maryland uh tell me why you thought it was so important to be here well just just the history i wanted to see john glenn go back up in space again and what's so important about this mission as far as you're concerned well i think it's going to give a business space program that you know for further funding and whatnot i just i just think that the space space program needs a shiny arm right now and this will do it i believe so you see the people exactly

[01:40:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6001s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6001s)

the people exactly alice alice and bob wills are here from uh from cleveland ohio uh the state where senator glenn is from tell me why you thought it was so important to come here for this well we wanted to represent our city which is uh a space town with nasa there and also a great city to live and our uh family and our church from grace baptist and glenn has always been real special to us and so what do you think about seeing him return to space 36 years later i think it's fantastic i just admire a man that's 77 that could actually go back to where he's been and uh just be really important to his country and bob what do you think about the importance of this to the country itself well it's the first one i've ever seen live and i'm really going to enjoy that but john's kind of special to us and we'd like to see him go up the second time i saw him on tv go up the first time and you kind of look at somebody else and it was over so this one he's really going to enjoy going and uh there's been some controversy about this flight some people are critical saying that the science is not real science that it's just a pretext for a nostalgic visit uh back what do you think about that or does it matter i i really don't know whether that's true or not but i know what does matter and that is john is getting everybody all excited again about going up to space and that's what nasa whole program needed is a kind of a shot in the arm of the people getting back into it so i think if if nothing else that is a real value well we appreciate talking with all of you uh enjoy the show uh it's going to be quite some show here we're going to have a good view right over here to the left of the vab uh the the vehicle assembly building and we're all looking forward to it again a crowd of 8 000 people here an estimated crowd of 250 000 to 300 000 in the entire brevard county area here watching this event miles back to you all right mark potter enjoying himself out there once again a spectacular view on a spectacular day from the goodyear blimp as we look at florida's space coast in preparation for the launch of discovery

[01:42:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6120s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6120s)

the launch of discovery six people and a seventh by the name of john glenn his second historic flight into space is now an hour and 20 minutes away if things go according to plan stay with cnn for extensive live coverage of this event we'll take a break right now and we'll go back to atlanta and check in on what's going on in the rest of the [Music] world lunch of the shuttle discovery in just a moment all right we're back live live at the kennedy space center and you're up in the white room as they call it which is uh the gangway which leads to the shuttle entrance which is now being sealed shut dave wolfe uh this is an important procedure i recall a mission um not too long ago where they had some difficulty with the seal here it's very important that this be leak checked and properly fitted onto its uh where it belongs before anybody uh blasts off right that's right it's critical and now that the hatch is closed the ground crew that we see there will be installing a fitting to pump the pressure up in the vehicle all the vent valves will be closed during this check and we'll do a leak check and look at make make sure that pressure is held by the vehicle when it's declared successful then they'll finish closing out this white room and leave the area can you identify any of these people here those are people i've worked with for a number of years on various missions and they're the most talented workforce in the world the people at kennedy space center you have out of confidence i guess you have to have a lot of confidence in the people who are preparing uh such a complex aircraft that's right you can't pre-flight your own airplane in this case you're trusting the work of thousands of people space station will be the same way and uh it's just a wonderful team it's really the uh brings out the best in a lot of people dave well if i'm curious uh this question is the question you probably answer quite often but uh

01:44:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6241s)

probably answer quite often but uh i'll ask it anyway when you're at this point and that hatch seal's shut and you're in your suit and you're basically the only communication you have is via radio you're kind of shut off in the world is it uh are there moments when it is scary you know scary isn't what i felt uh it there's a certain calmness and peacefulness you've trained for years for these missions and it's time to go do it you've got on your mind what you're about to do it's a very busy uh set of activities as soon as you obtain orbit zero to eighteen thousand miles an hour in eight and a half minutes or a little shy of eighteen thousand it's a spectacular ride you're hoping everything goes right but it's more of a hope and a calmness and anticipation you know i think it's uh important to point out here that really what astronauts are thinking about probably is really the minutia of their jobs right now in other words what do i do if when right well they've practiced uh this sequence assassin sequence many hundreds of times it's it's almost automatic for most situations but you're wondering will there be a situation we have not anticipated that we have not practiced for and that's a hard situation to run over in your head because you don't know what it is if we thought about it we'd have practiced exactly now it looks like the the gentleman right by the door there has what appears to be some sort of pressure gauge and i assume that's what that's right that's right there's gauges inside the orbiter there's telemetry to the control center and there's a fitting that you will actually pump up the pressure through it's probably worth pointing out here too um that in the some of the worst case scenarios that hatch is designed to blow out and out would extend a 10 foot long pole and the astronauts in a situation where multiple engine loss for example might actually have to bail out once you walk us through the procedures you have to go through on getting out of an orbiter

01:46:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6360s)

orbiter extending that pole and bailing out how would that work that's right well the first thing is the vehicle must be within parameters where successful bailout can occur and that is some sort of controlled gliding flight and therefore on ascent you have to start the return home at least if you're not going to make your landing site if you're going to go long if you're going to go short or in the ocean then you get we like to get down to around twenty thousand feet although the system is capable up to a hundred thousand feet for a bailout since the astronauts are wearing pressure suits the ms-3 sitting on that seat will will pull the set of handles that blows the hatch before that the pressure will be equalized by the commander controlling the vent valves this the system will put on be put on a sense a set a an attitude hold a kind of an autopilot to get ready for all seven crew members to take their turns coming out you'll clip on a fitting to this pole and this pole makes sure that these high speeds you don't come back and hit the tail of the orbiter it pulls you down below the tail of the orbiter each one diving out in sequence hopefully very quickly and there should be time in the case of a water ditch water in all cases water flotation equipment comes out with you raft life preserver all right i gotta i gotta interrupt that for just a moment the president of the united states has arrived let's look at some pictures here there he is patrick air force base about 10 miles due south of where we are now walking off of air force one dave um the last time a president was here apollo 12 i asked alan bean about this earlier they launched into a thunderstorm and of course many have suggested over the years that the the pressure of having the president here somehow skewed the decision what would the folks at nasa think of that well i know i can only speak for nasa today we have safety foremost in our mind we have strict flight rules for these conditions we

[01:48:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6480s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6480s)

flight rules for these conditions we have a set of what are called field mills operating right now that look at the static electricity potential in the air and if this exceeds a certain level we do not launch and uh we would not wave that except uh if there was a very good reason a moment ago you mentioned that the you practice for every imagined contingency what you're concerned about is the unimagined contingency that you haven't practiced for and i was reminded of years ago in the first shuttle simulator at houston and i was in the simulator with john young and he was showing me how thing would work and we made a landing and just as we made the landing mission control came in and said john we have an indication of a fire in here and john turned to me and said not on the speaker back to the mission control he said what in the world they want to practice that for now they know we're just up here having a little fun we haven't practiced a fire and a roll out what a fire i don't have any books here for anything and they said john uh please we have an indicator fire you said i know i know i'm working on the problem they said oh heck not not in the shuttle in the building here get the devil out of there oh it's not funny but it can cause confusion can it what's real what's simulated let's talk a moment about the crew uh there are six other astronauts on board here at times we perhaps forget that but the fact that that remains it is a seven member crew including john glenn each of them outstanding in their own way there's the walk out as you see them go by this happened earlier this morning as they headed out to uh launch pad 39b they're now all strapped in the hatch is closed and uh let's uh talk to kurt brown i'll talk about kurt brown first kurt brown is a graduate of the air force academy spent a lot of time flying a-10 aircraft he has lieutenant colonel in the u.s air force 42 years old from elizabethtown north carolina his mother has been very ho-hum about his career but

[01:50:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6600s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6600s)

about his career but when she found out that he was going to be flying with senator glenn she got rather excited now sitting beside him in the right seat steve lindsey he's also an air force colonel steve lindsey is the pilot and he is 38 he is from arcadia california he's the one who is pushing the concept of putting civilians in space perhaps engaging in tourism in space someday if that becomes practical mission specialist stephen robinson is the payload commander of this mission his crewmates call him steve nye the science guy he is an interesting guy with a phd who uh has a lot of interesting ideas about a lot of things he's 43 years old born in sacramento california and he is excited to shake john glenn's hand once they get into orbit because john glenn the first time he went to orbit was all alone scott perezinski has a resume which would take up about six or seven of our screens here on cnn so we'll give you the short version scott perezinski has lived all over the world is a medical doctor and mission specialist on this mission he is 37 years old and originally from little rock kansas although that doesn't really speak to his background he's lived all over the world as i say he also is serving as the flight engineer which means he sits in the middle seat right behind between the pilot and the commander and as he has told us many times for an astronaut this is about as exciting as it gets pedro duque juan glenn as they call him these days around the cape and in houston he will be the first spaniard in space uh if all goes well in an hour and 25 minutes he is 35 years old born in madrid spain he's been waiting six years for a flight he was with the european space agency first signed on six years ago was training for some mere missions never got an opportunity and this is his first opportunity jackie mukai also on board this mission she is from japan she's a payload specialist and she has

[01:52:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6720s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6720s)

she's a payload specialist and she has already earned the title as the first japanese woman in space on a previous mission she's 46 years old and she is also a medical doctor and her her mother at age 73 said oh shiaki i want to go myself when she heard that john glenn was a board and finally of course the man who needs less biographical sketching for you because you're pretty familiar with his story john glenn the lowly payload specialist on this flight a nasa astronaut who uh was uh among the first seven the mercury seven at the age of 77 making his second flight originally born in cambridge ohio grew up in new concord went on to a little career in politics and now he's back in his original profession of flying high performance aircraft and spacecraft and uh walter cronkite you've known john glenn for years uh he you've i've heard you describe him as a boy scout and i think you mean that as a compliment isn't that right well absolutely although i'm not sure that uh all of his fellow astronauts actually consider it that way at the moment i was quoting them i wasn't making that up uh it was their feeling about john was he was the oldest of the group for the original seven and he was he seemed a little bit uh a little humorous to them he was so devoted to the commission when they went to langley virginia for the first time immediately after being selected as astronauts for training for instance all the rest of them took their families down there they're going to live there for months for years perhaps and he didn't take his family because he thought he ought to be devoting all of his time uh to to the mission training it was that kind of thing in each almost each of the decisions all the way down the line john was out there saying it ought to be done this way let's be sure we're right about it and do it this way uh and uh i think that's where he got the reputation of boy scout

01:54:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6840s)

reputation of boy scout well you you might get the impression uh if you've for instance seen the movie the right stuff that john glenn was uh well i the pejorative would be goody two-shoes and that the rest of the guys were just boys will be boys kind of guys i'm not sure that that's an entirely accurate picture i hate that picture yeah i thought that tom wolf's book the right stuff was pretty good but when they made that into a movie they turned it into a monkey house fraternity house kind of an environment they libeled almost everybody concerned all the astronauts all the backup personnel all the scientists the the they made the german scientists uh look like burlesque characters with their accent and lyndon johnson was made of a phoon the press laid it was a terrible situation all right we're going to take a break break our continuing coverage of the launch of the discovery 7. we'll continue in just a moment stay with cnn [Music] we're back live at the kennedy space center a shot from the goodyear blimp looking down upon some of the hundreds of thousands expected people watching and waiting for the launch of the space shuttle discovery coming up uh in an hour and 23 minutes or so if all goes well so far things have gone well indeed the orbit are performing as well as it uh can or should no problems reported and uh well the weather i suppose a picture speaks a thousand words it is a beautiful blue sky the wind is just barely fluttering those flags we are t minus 57 minutes and 27 seconds that is going to bring us down

01:56:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=6960s)

to bring us down to the uh what is that that is going to bring us down to the 20-minute hold the t-minus 20-minute hold which will last for 10 minutes and once again we've been explaining what holes are all about that's just nasa's way of kind of keeping track of where they are on their schedule they stop the countdown they regroup make sure everybody's doing their jobs correctly and then start the clock once again as we told you before the break it's not just about john glenn there are six others aboard this mission and there are 83 distinct experiments they're going to have a very very busy time once they're in orbit 3 2 1 0. the flight of gemini 4 in june 1965 marked not only america's first spacewalk but also the first time manned space flight was controlled not from cape canaveral but from houston houston was picked over 18 other cities to be the home for mission control whether it was a trip to the moon or earth orbit in the shuttle okay stand by the fact that it's here is sort of irrelevant once like you say once the vehicle launches it could be anywhere on the face of the earth and liftoff of space shuttle columbia while florida maintains control over the launches once the spacecraft lifts off the pad houston takes over discovery houston for av-8 go ahead houston working in shifts around the clock flight controllers monitor and analyze every aspect of the shuttle's performance and the crew's health we control the mission collectively both in terms of helping the crew manage the system maintaining the timeline and doing the replanting and doing the bulk of the decision making here on the ground this newest version of mission control began operation just three years ago it cost 250 million dollars and uses standard workstations and local area networks rather than the big mainframe based system of the old mission control there are some replanting summary sheets included

[01:58:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7080s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7080s)

included in your execute package astronauts fill the role of spacecraft communicators capcom they're the voice of mission control to the shuttle and also to represent the crew back to the flight control team and to sort of watch out for the crew's interests help us keep an awareness of what the crew might be thinking in the cockpit or how the crew workload is being distributed among the crew members how important is mission control well people here at the johnson space center will remind you that when buzz aldrin and neil armstrong first landed on the moon the first word transmitted back to earth was houston tony clark cnn johnson space center later all right clearly that was not uh the piece which we had intended to give you that was tony clark explaining why mission control for this once the shuttle clears the tower is in houston and i've got walter cronkite news yeah lyndon johnson was the powerful majority leader of the united states senate they needed his support they needed his money and he represented the state of texas that's why it's in use no there was a little more region than that there was some thought actually they'd launched from that area and they decided that the florida peninsula was a better launching space a little bit further south which helps the azimuth of the orbit so they they gave up the launch from houston but that that was one of the early considerations dave wolf how do you feel about having kind of this bifurcated existence between houston and florida would astronauts prefer to be all in one place well it's important that our whole country share in the experience we have space centers in almost every state certainly business in every state of the union it certainly would simplify our lives a little bit but it works out fine i can tell you that they're critical and very important to the space flight you saw phil engelhoff the flight director he's a critical player in this launch as soon as the shuttle does its role just after launch that center will be taking over control all right and of course houston allows

[02:00:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7200s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7200s)

all right and of course houston allows you an opportunity for a good excuse to get in those t-38 trainers and light it up and take a ride so anyway we're going to take a break when we return we will meet and uh discuss the mission with one of john glenn's best friends that's to and we're gonna have a surprise guest as well so stay with cnn [Music] the space shuttle discovery poised to make history we are one hour away from a launch the clock here at the kennedy space center indicating all systems go the weather all systems go there john glenn's historic return to space is less than an hour away the clock indicating t minus 47 minutes with holds that equates to about an hour february 20th 1962. 36 years later former mercury 7 astronaut former senator a true american hero john glenn returns to space i'm very proud to be part of the beginnings of america's space program and needless to say i'm excited to be back glenn made history when he became the first american to orbit the earth today a remarkable journey back to the heavens at the age of 77 he will be the oldest human being to fly in space john glenn is a cod-carrying member of the aarp he's one of a seven-member team aboard the space shuttle discovery in search of answers to the human aging process here on earth there's some 35 million americans over the age of 65. i view myself as representing those people the return of john glenn to space and

[02:02:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7321s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7321s)

the return of john glenn to space and the return of walter cronkite to the anchor booth this is cnn live coverage here now from kennedy space center in florida cnn's miles o'brien and walter cronkite hello everybody welcome to our continuing coverage of the launch of sds 95 that's the technical nomenclature ford what everybody else is calling it john glenn's return to orbit a historic occasion here at the kennedy space center in florida and a perfect day for it if nasa had to write a script for how to do a countdown this is exactly how it would look let's take a look at some of the pictures we've been looking at all this morning as we introduced walter cronkite walter can you remember one any smoother than this no this one's going perfectly so far and you almost hate to say that you want to knock on wood keep your fingers crossed because there are a lot of things in that spacecraft that could go wrong between now and launch time to keep the launch from taking place so we we just have to hope that it keeps on like this and we're going to get off in about an hour all right let's walk you through the day the crew woke up on time eight on time and walked out to the launch pad on time let's take a look at some of the pictures as we've seen them there is the seven member crew john glenn right there in the second row to the right of your screen they walked out at about 10 45 a.m eastern time exactly as nasa had scheduled it they go into the motorhome and head their way on to launch pad 39b they were strapped into the orbiter and the hatch was closed promptly at 12 30 p.m eastern standard time this is the mid deck and in the middle there is john glenn being attended to by a suit technician in the foreground shiaki mukai japanese astronaut everybody getting buttoned up and ready for a tremendous liftoff eight minute and thirty second ride into orbit john glenn's second ride into orbit the suit technicians doing their job the launch pad ready everyone else ready here and anticipating what is uh have to be an historic occasion at 2 p.m eastern standard time we've been talking a lot about john glenn

02:04:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7440s)

been talking a lot about john glenn today we've been talking about a lot of the crew let's take a look at john glenn a person who people know well but who is somebody who is a complicated person who's done a lot of things besides fly in space and be a u.s senator 36 years ago he took the ride of a lifetime today he's having the time of his life it's exciting and i'm just glad to be back and be part of it for john herschel glenn jr the joyride began july 18 1921 in cambridge ohio as long as anyone can remember he was fascinated by airplanes he was eight when he took his first flight it was quite an experience because you know there you are up there suddenly looking down on on houses and roads and all the other things that people experience uh have experienced in going up in airplanes and that really impressed me as a as a boy and i have you know i wondered at that time i guess whether i could ever fly myself or not he had found one of the two enduring loves of his life he met the other at about the same time anna margaret castor annie the daughter of a new concord dentist it's rumored that they started looking at each other at the age of three and it lasted and still exists throughout their whole lifetime they were married less than a week after glenn earned his wings as a marine fighter pilot the year was 1943 glenn shipped out almost immediately for some dangerous duty he flew 59 combat missions in world war ii 63 in korea his dog fighting days behind him glenn ascended to the rarified era flight testing these are the astronauts in april of 1959 he and six other square jaw jet jockeys were introduced to the country as the mercury seven he was a boy scout among pranksters but when it came time to pick the first

02:06:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7561s)

when it came time to pick the first and the second to fly the boy scout did not get the merit badge instead john glenn drew flight number three the first u.s orbital mission god stayed john glenn the nation held its breath as his autopilot failed and he flew the tiny capsule by hand then made a fiery dive back into the atmosphere with a warning light showing his heat shield might have been loose in less than five hours he splashed down safe and sound a superstar of lindbergh proportions wherever i went or i went with my family it was just like a tidal wave of emotion almost sort of sweeping over us at that time it was something we hadn't foreseen at that time but it was it was something we lived through and i think we we handled it all right i guess we did but fame turned out to be a two-edged sword for john glenn fearing the loss of a national hero john kennedy grounded glenn without telling him so directly when glenn saw the writing on the wall he left nasa frustrated disappointed but still on a mission to succeed and so he did as an entrepreneur and executive for royal crown cola but the business world was too confining for this global icon so he threw his helmet into the political ring finally winning a seat in the senate in 1974. in 1984 he aimed for the highest heights in politics but the glenn for president campaign never really got off the pad he was a moderate among political zealots an optimist among cynics i think john glenn always wanted to see the best in people and always expected the best from people and he didn't realize that sometimes you had to contend with what the worst is that the human race has to offer do you solemnly swear that the testimony that you would give before this hearing will be the truth nothing about the truth so happy god i don't perhaps it was that trusting nature which laid the groundwork for his darkest political days

02:08:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7681s)

darkest political days he was one of the so-called keating five senators accused of unethical ties to charles keating who was implicated in the junk bond scandal of the late 1980s that was probably the low point of my my life was to have those kind of charges that that eventually as i knew they would be were proven to be untrue if that was the valley this must have been the peak i am extremely proud to announce that john glenn of ohio the first american to orbit the earth will get his long-awaited and much-deserved second flight this january nasa administrator daniel golden finally gave john glenn that long delayed second flight the one glenn had been lobbying for for years this is not a flight of fancy this is a flight for the future some people thought i was going just because i was a sender and i demanded to go or something which absolutely was not true uh i wouldn't go that way so i did not this wasn't a payoff or anything like that it may not be a payoff but payload specialist john glenn wanted to be here very badly and when john glenn is determined it seems there's little on or off earth that can stop him and his determination has led us to this point t minus 34 minutes and 19 seconds which when you account for about 20 minutes of expected built-in hold time that nasa likes to do means that the launch is scheduled in about 55 minutes and so far there's nothing stopping it walter you know we met a lot of people here this morning past astronauts present astronauts some of the pioneers the space program and the launch teams i'd like to introduce now another hero of the early days a pioneer of space around here the fellow his name is henry landworth and he was spent his youth unfortunately in know one of the concentration camps

02:10:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7801s)

in know one of the concentration camps of hitler's auschwitz uh came to this country as a survivor after that uh terrible experience found his way to cocoa beach where he was the first manager of one of the first motels at cocoa beach just as the space age was brimming and he became a close friend of all the astronauts the pioneer astronauts the mercury seven who stayed at his hotel and all of us news people who stayed at his hotel he was a hero to all of us and uh henry is delightful to have you here today i know you're now a very successful hotel year and in orlando and elsewhere john glenn is a fellow investor with you in your hotels and he's a very dear friend of yours i we heard a moment ago from jimmy buffett was also one of our guests here just a moment ago about going trying to go fishing out here and i was reminded that gordon cooper once took advantage of your hospitality to go fishing yes he did i came one morning to the hotel and gordon was sitting on the side of the pool with a fishing pole and i walked over to gordon i said gordon what in the world are you doing i said i came here to fish i got some time so i'm going fish and i look down to the pool and there's four fish i said stop it this is a pool gold nice i'm not going straight i'm going fish and he went out fishing nothing could happen where'd he get the fish i have no idea there were four of them in that pool he must have supplied his own fish i gather that was your conclusion wasn't it there were a lot of practical jokes played on you and you played it on there it was a game of practical jokes tell me about the towel episode with john glenn one day i i heard jan blink came to the lobby pounded on a desk and said what is going on with this hotel i don't get any towels in my room

02:12:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=7920s)

in my room and i walked out i said john quiet down i mean people are hearing you please stop he says no no you're going to give me the towels i'm going to demand and you just make a racket everything so he went on his mission he came back and i put about two and a half ton truck of towels in his room he couldn't get into the room he couldn't open the door and then he called me up and says get me out of the room henry i'm sorry about the towers so that was the story henry we've talked much about the delays of ma6 john glenn's flight he made it finally on the 11th attempt that was set up 10 times before he actually got off three times he was suited up twice at the top of the pad right but you had your problems with those delays of that flight didn't you big one big one i i felt that i really wanted to do something for john glenn and he has been my best friend now for 38 years and i was determined to do something that nobody else will do so i decided i will build them a cake bacon a cake of the exact measurements of the capsule which was six feet wide and nine feet tall and everything was set till the next day my chef comes into my office and says we went along with this you request and we all for it there's only one problem uh when we built that cake six feet wide wouldn't get to the door of our kitchen so i said well there must be a way so what we went ahead and hired a big truck i don't know the biggest truck we could get and we're assembling that cake in that truck it was a pound cake and a fruit cake and that cake was ready to be rolled out mcdonald aircraft was giving us actually

[02:14:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8040s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8040s)

mcdonald aircraft was giving us actually build as a lift special lift for the cake and when john went up to space that cake was supposed to be rolled out when he was coming down to earth so i called charlie buckley who is the who was at that time the chief of security i said charlie i want to get that keg out to the cape and we're going to cut this with all the dignitaries and everything and i just told him listen charlie this is important he says no it's not important at all i'm tired of this cake you're never going to go come to the cave and there's no way you're going to poison 2 3 000 people that stupid cake well anyway i said charlie i'm going to make a deal with you you sent me two dietitian from the astronauts and one of them was finkelstein i'm sure you knew it and they he did that now if that cake is good would you allow me to come out and that cake was good and we rolled it out to the cake and mr macdonald gilroud all the boys were cutting that cake and was a big celebration it was fun well henry thank you very much you you were a hero to us news people i can tell you because in those early days uh uh when before nasa took over the space program and it was a u.s air force effort the air force felt very heavily about security naturally because they were thinking of weaponry rather than man in space and they wouldn't let us onto the cape at all so we had to stand on a granite fairway out there by the by port canaveral cold miserable all night long we wouldn't know until the lights went on that they were about to launch one of their experimental rockets but we'd have to be out there our poor cameraman they're keeping their eyes glued on that that white and we didn't know when when they've been scrubbed because the light stayed on it might have been scrubbed for hours and we'd still be out there all night long waiting but we complained about this quite a lot around the bars

[02:16:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8161s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8161s)

about this quite a lot around the bars henry overheard us and he found he he found the answer he knew how to tell us whether the mission had been scrubbed or not when the engineers all came in from the cape and went to the bar he knew the commission had been scrubbed he sent a messenger out to us and we were able to join them with the ball henry thanks a lot good luck to you thank you sorry thank you thanks for inviting me that's what i call a reliable source stay seated for a second we're going to take a break when we return the president united states is here he's at the launch control center we're going to have an exclusive interview with him shortly stay with cnn [Music] we have a very special guest with us miles at this moment but not exactly with us around us president of the united states bill clinton is over at the vehicle assembly building right over here a couple hundred yards away from us and we have the privilege of saying good morning to him welcoming him on behalf of cnn at any rate to cape canaveral in this launch good to see you mr president good morning walter and good morning miles good afternoon i'm delighted to be here they say they say mr president that there are more visitors here than any time since the moon launchings the moon flights and uh that includes president of the united states uh what's particularly appealing to you about this flight well of course there's the john glenn factor senator glenn is a very good personal friend of hillary's in mind as well as an ally a colleague and like all americans i'm thrilled that he's going up today uh but also you know this really is uh

[02:18:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8280s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8280s)

uh but also you know this really is uh the last launch before we begin to put the international space station up so john glenn began this first phase of our space program and he's he's ending it just before we start on the space station so it's it's very exciting it's important for the space program but it's a great day for america a great day for our senior citizens and uh i hope that all americans share the exuberance that i feel today you know some naysayers say mr president that this flight of cleanses your reward to him for his stalwart support of yours during his years in the senate anything to that no i i've always wanted john to be able to go back as long as i've known he's wanted to but if i'd had my brothers he'd be home in ohio running for reelection right now and he said he was too old to serve another term in the senate but he wasn't too old to go into space and i think the american people should know that the decision to send him was made strictly by the book i had no role in it he had to pass the strenuous physical exams and then for each experiment he's going through he had to prove that he was qualified and able to do that i think this is very important you know one of the most important benefits that the american people derive from our space program is the whole rush of discoveries we get that help us here on earth environmental discoveries health care discoveries of all kinds we've got all kinds of medical uh scanning equipment today that we wouldn't have but for the space program we've got protective clothing that people who are super sensitive to the sun can wear that we wouldn't have but for the space program so we're going to get a lot out of john glenn going up there today and i think the country is well served by doing it and goodness knows for a lifetime of service to us in the air and on the ground he's earned this chance you know they say that president kennedy grounded glenn uh after his first flight because he didn't want to risk the death of a hero out there in the second flight would you have made that

[02:20:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8400s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8400s)

second flight would you have made that decision well i don't know i can't say because i wasn't there then and it's easy to second guess but i'll say this i think that john glenn going up today is a very good thing for america we're going to learn a lot from it and we're all going to i think be thrilled by it and i'm just glad he was brave enough to do it you know out there on pat 39a mr president uh there to the right to the south of the 39b from which this flight would take place there's a shuttle scheduled to take into orbit in just a few months the first parts of the planned american russian joint international space station almost a small city permanently in space now that russia has this desperate economic situation that endangers that schedule it looks like we may have to put in a lot of money a lot of money to try to keep that space station on schedule the construction of it are we prepared to do that well walter if if it were required i would be uh supportive of it uh and i would be happy to talk to the congressional leaders in both parties you know our space program has been a great investment it's had hardly any increase in funding since i became president but we've gone from two launches to eight launches a year we've dramatically cut costs nasa is the sort of the the star the poster child of vice president gore's reinventing government campaign and we're getting a lot out of it if we were required now to help the russians during this difficult period which will not last forever so that they could continue to participate i would be in favor of that i think that it's very important that we have the europeans the japanese the canadians and the russians in the space station venture i've been here i've been over the space station project many times in great detail in houston i've been uh twice i've been down there to look at that and i think we're doing the right thing with the space station and we need to stay with it mr president it's miles o'brien i have a question for you but first i want to check the countdown clock for our

[02:22:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8520s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8520s)

check the countdown clock for our viewers for just a moment we have now entered into a hold a 10-minute hold we are at t minus t-minus 20 minutes and holding the hole began at 1 20 p.m eastern standard time it will end at 1 30 pm eastern time and then we'll count down again to nine minutes another 10-minute hold at that point once again to remind our viewers this is simply a way of nasa keeping up with the important business at hand and making sure everybody's doing their job and time mr president i'm just curious are you nervous oh a little bit i think that uh it's part of the excitement i'm a little nervous but i've got great confidence in these people i've i've had a lot of great honors as president to meet people who serve our country but meeting the people who are in the space program the astronauts those who work on the ground those who plan these missions they've done everything they can possibly do and they would never compromise an iota of safety or reliability just because hillary and i and all the rest of the world are here through the media i feel good about this but yes i'm nervous and i'm excited i feel like a kid at his first christmas i'm very excited about this mr president president bush of 1989 proclaimed the national goal to send humans to the planet mars by the year 2019 that's the 50th anniversary of neil armstrong's first step onto the moon do you affirm that goal to mars mission well let me say what we're doing now will help us once we get to the position of evaluating that i don't want to either affirm or renounce it what i think we should do is to recognize that what we have now is a set of very focused goals in our space program we are working on the space station we are working on the shuttle we are working on space transportation we are working on things that tell us about our environment on earth and then we're doing these special projects the hubble telescope which is magnificent and we did the mars

[02:24:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8640s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8640s)

which is magnificent and we did the mars pathfinder mission uh on you remember july the fourth of last year and so we're gonna see how we are let's get the space station up and going and uh evaluate what our long-term prospects are i tell you this i am for the continued aggressive exploration of space uh in ways that are uh high quality cost effective and it will benefit us here on earth and i hope that we can have as a result of this flight today even more broad-based american support from all americans of all parties in all walks of life for our mission in space it's still very very important mr president as a journalist i think i'd be remiss at this moment in time if i didn't ask you what your advisors are telling you about the results of next tuesday's election the truth is they don't know we've got an extraordinary number of very very close elections in this two-year period the members of the other party raised i think a hundred million dollars more than our folks did but we've got good candidates and extremely good grassroots effort i think a good agenda the only thing i think i should say today to avoid being too political is that it's a very important election and i would hope that every american who is eligible to vote would go and vote in that election if you look at this space launch today this is a triumph of american democracy it was made possible by the elected representatives of the american people supporting the space program and it is just one more example of why it's so important for citizens to stand up and be counted on election day so if you feel patriotic when you see john glenn and the others go up in space today and keep that patriotic feeling till next tuesday and go and vote for the candidate and the programs and the issues of your choice all right mr president thank you so much for being with us on cnn today and we hope you enjoyed the launch thank you i will i think i ought to say just one other thing because i'm talking to cnn i know that

[02:26:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8760s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8760s)

cnn i know that i speak for a lot of people when i express my thanks to the late john holloman for the work he did to advance our cause in space and i know that all of you will be thinking about to him and his family today and i thank cnn for giving such a high profile to our space mission thank you all right thank you mr president for those words miles and i were going to dedicate this broadcast at an appropriate time to the memory of john holloman who was the space expert at cnn was as skilled as miles planned to be in this anchor chair and who was killed unfortunately in an automobile accident just a couple of weeks ago this podcast is dedicated to the memory of john hoffman all right it's time for us to take a break when we return we'll check in and see how the crowds are doing along the beaches cnn's mark potter there goodyear blimp hovering overhead with the clock holding at 20 minutes stay with us [Music] welcome back live the kennedy space center the place perhaps a place where history will be made in just a short while a little more than a half hour that clock reads 20 minutes and holding t-minus 20 minutes and holding to be specific we are in the middle of a 10-minute planned hold that is part of nasa's routine here as they tidy up business make sure everybody is set to go on to the next level which will begin at 1 30 p.m eastern time they will count the clock down to nine minutes and engage in another 10-minute hold once again all this is about safety

[02:28:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8880s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=8880s)

hold once again all this is about safety all this is about making sure everybody's doing their job right all this is about making sure we have a safe flight today nothing on the horizon whatsoever which would indicate the shuttle will not launch on time at two pm eastern standard time the crowd bill and the kennedy space center has been closed down because it's just jammed with traffic there are so many cars there they can't go anywhere and that's where the people are going to watch the liftoff whether they wanted to or not they're stuck and it's actually not a bad viewing spot it's pretty close some of the traffic has been backed up for five miles we've been told but overall the sheriff's department says that everything has been going well there have been no major problems no major injuries and everything is going well and everyone is now just waiting for the launch miles back to you can't do you yet all right all right thank you very much mark potter enjoying the scene from the group on the causeway and the beaches the clock has started up once again and we will continue counting down from 19 minutes and 24 seconds on down to nine minutes and then we'll have another 10-minute hold once again all part of the routine here let's move along to ohio you know ohio for some reason is the home to more astronauts than any other state the buckeye state has 23 astronauts president former jeff flock is in new concord where john glenn was born and says spent most of his life jeff that's right miles we still haven't figured out exactly why there are more astronauts here from ohio but we know it's true we're at muskingum college it's a small college out here in new concord ohio and if you go down to the floor we're up here with a couple of special guests who have spent some special times with john glenn over the years but first i want to take you down to the floor and show you the big screen televisions that have been set up it's reminiscent of 36 years ago it was the college gymnasium back then too where all the press and all of the townsfolk gathered to watch their hero uh reach for the stars and they are here again the old gymnasium where that took place is actually now named for john glenn and

[02:30:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9002s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9002s)

is actually now named for john glenn and i'm with one man who was the best man at his wedding and another man who played football with him here at miss kingham and uh lloyd white i guess i have to ask you what's going through your mind and what's different about this one than the one 36 years ago well i think as john said the technology is so much improved now i guess i'm not as nervous as i was 36 years ago he's got a pretty good chance of coming back this time well i think so yeah i think so i'm not too worried about that part of it yeah uh we've got a picture by the way of that uh of that wedding day you said uh you almost don't remember that that was quite a while ago yeah well yeah and i didn't know there was any pictures ever taken of it but i do have a clipping that told who was there so yeah that was a great day he was in service at that time and came back from service and in his uniform and and obviously he's the best man there was another student another guy who had been in school there i can't but i don't know who it was i want to move to uh harold kaser now who played football here at muskingum with him harold did you ever have any indication when you were playing football together back then uh where john would wind up no no indication of where he'd wind up but we knew he had had some real basic skills he was a good player he played center on the team and he hit hard he he had certain goals that he wanted to accomplish he was committed to accomplish his goals uh he was a good guy good uh good sportsman you know we've got a camera outside it's uh uh out at the old gym which is back then not named for him but it is now they're gonna they're gonna uh plant a time capsule out there to kind of mark this momentous occasion now lloyd about john going up now at his age some people have criticized it and said oh it's just a reward for past service and all that sort of thing well he's serious about this of course he's been chairman of the aging committee for the senate you know makes sense to you yeah and he's worked

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makes sense to you yeah and he's worked a long time lloyd harold i appreciate it very much thank you so much we're going to leave you with a shot of this place i guess it explains miles and walter as well as anything can why john glenn is who he is it's out in this small town out in this country this beautiful country of ohio it's where he came from and he'll never be farther away from new concord than he will be today but in some ways i guess he takes a little bit of it with him that's the latest from here folks back to you all right jeff flock in a beautiful new concord ohio look at those fall colors there a beautiful day there just as it is a beautiful day here we have a couple of special guests joining walter and me first of all sitting immediately to my right buzz aldrin the second man to walk on the moon who has been sitting here watching the countdown go down and from second i think i recognize him anyway from sacramento california chuck yeager the man who first broke the sound barrier in an aircraft uh chuck first of all uh what are you thinking about this flight good idea yeah pretty good deal you know uh nasa sorely needs some publicity and they couldn't have picked a better guy than john glenn who did such a tremendous job back in 1960 t and and uh i'm watching with a great deal of anticipation and talking to walter cronkite man i get the feeling this is an old man show with uh with the exception of the of the young six that are hauling john up into space and talking to walter who's been around for a long time and myself last time i saw walter we were on the ramp at uh edward's looking at a bunch of old airplanes if you remember walter never forget that chuck and as a matter of fact i wonder are you a little more comfortable today with this form of rocketry you and i by talking to you i became convinced that we should have been working on returnable aircraft from the very beginning rather than go for the disposable booster yeah basically uh like you got buzz there beside you he uh

[02:34:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9240s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9240s)

like you got buzz there beside you he uh sort of served as a comment on the aerospace research pilot school the air force was very much in space with the mold man orbital laboratory and the x-20 dinosaur which was a reusable space vehicle but they sort of changed things in 1966 and and uh made space for peaceful purposes and we sort of backed out of the the space program and and uh consequently nasa has done a very good job with the exception i i just sort of get the feeling that it would have been better to put a young astronaut in that seat that john is sitting in so that we could use him for the next 15 years yeah well when you took x1 up there and and broke the sound barrier we thought maybe you'd go right on up to the stars well that i wasn't qualified to be a nasa astronaut since i only had a high school education but it was fun flying airplanes you bet well yeah did a great job of it too chuck thank you very much walter chuck let me ask you one question i i know in the early days the program uh test pilots such as yourself often had disparaging remarks for astronauts they felt the old spam in the can uh analogy applied i assume you think differently these days is that true no basically the shuttle is a is an airplane and the guys who fly it uh fly it like an airplane and land it like an airplane originally uh with the stuff that buzz flew in the original seven astronauts they had very little control over where the vehicle landed because they had a very low low d and consequently uh i was an airplane guy and didn't hold an awful lot of interest in in the capsule return the shuttle's a different vehicle because it flies like an airplane [Applause] i'm afraid if we had uh stuck with airplanes the russians might have beat us to the moon i think we needed capsules uh we needed the simplest way to get up and then provide the maneuverability on orbit and as much control of the landing site as possible uh it certainly uh is a viable way to

[02:36:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9360s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9360s)

uh it certainly uh is a viable way to put things into orbit with uh airplanes as we're seeing with the shuttle i'm very much in favor of booster rockets first stage rockets coming back and landing like an airplane but but being launched vertically yeah i wonder go ahead chuck yeah basically buzz if you recall the x20 was a very similar vehicle to the to the shuttle itself and uh but we'll never know so it's all speculation well i guess i suppose in a perfect world you could have had both programs going simultaneously but uh money was uh scarce as it always is perfect an even richer world exactly when an airplane has to carry all the fuel along with it uh it gets to be quite large when it's just being boosted as the shuttle is just being boosted and the x-20 was just going to be boosted you have to do something to contain all that rocket fuel that's going to get it going up there and you'd like to recover that part and that means a recoverable booster chuck i want to ask you you said at the outset that you feel that nasa needs the publicity this is a good publicity well stunt perhaps uh nasa continues to insist this is about science do you believe him yeah well i don't believe it's as important as as you would be led to believe basically because uh one seven day orbit by one old guy like we all are old in my opinion won't give you very valid data and that's the way i feel about it would you like to go if you have the opportunity i'd not be a waste of money i'd rather see the young guys at which there's more than 100 sitting down in houston eager to get into space and we could use them for the next 15 years as as active astronauts and that's just the way i feel about it well you know chuck they say that one man a database doesn't make in the case of john glenn one man's experience at the age of 77 up there won't do it uh you're a young kid of 75 right now why don't why don't we have a succession of flights and all of us at this advanced age will go one by one

02:38:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9480s)

at this advanced age will go one by one and we'll get a good database for it walter if i remember a few years ago you were sort of slated to go up in the shuttle and uh i agree you know quantity makes a good good quality i think we're building a crew here today cronkite buffett jager and aldrin yeah i i agree with walter i think one of the most necessary things we need right now is a journalist in space i'd like to see people explain to the public uh why individuals would want to go into space to in a very professional way a way that the public can relate to and can understand and not a biased point of view of someone who's profession it is to be in space but we want to know why a journalist would take the risk after all you get paid a lot just by staying on the ground it's not paid i'm sure that but but uh even more important than that i think is to relate the desire to be in space why do you take the risk because we're laying the groundwork for the next generation space shuttle which is going to carry a good number of people in the space not just the number that nasa needs but the number that are needed economically for a tourism industry all right gentlemen for one excuse me chuck i got to jump in here for one minute the words godspeed john glenn were etched in all of our memories anybody who's ever seen that launch the words uttered by scott carpenter as we look at the clock as it counts down toward the launch of discovery scott carpenter is here at the kennedy space center and he will be uttering uh similar greetings to the orbiter however they won't be able to hear it they'll hear it later it'll be sent up via satellite to the orbiter after it attains its orbit this afternoon and let's listen into that [Music] before the crew aboard discovery yes at this point in the count it seems appropriate to say to the shuttle discovery crew good luck have a safe flight and to say once again

02:40:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9602s)

have a safe flight and to say once again godspeed john glenn carpenter served as glenn's backup for the words etched in all our memories godspeed john glenn it said it all then and uh scott carpenter embellishing upon it today it kind of gives you goosebumps at that moment doesn't it what are you up to these days buzz i uh i i see you more than almost any of the other astronauts we meet in the strangest places roads roads yes well i was in the process of writing a book over there when we met uh maybe 10 10 years ago something like that i've written another science fiction story since then that's being made into a television movie i'm working on another space thriller but in addition to that the more uh pertinent things i'm working with an organization with reusable first stage rockets you take a rocket that already exists like an atlas we put an airplane around it so that after it does its job of lifting the upper stages it comes back and flies like an airplane uh back to land i don't know introduce this i know one of the one of the peanut butter boys one of the german pinum on the sinus craft ericky yes who worked for convair he built the built the atlas he uh he had this plan of getting the atlas actually launched and then taking those empty tanks and building a space station of those it made a lot of sense well that's going to make sense in the future as i say it too walter all right for now it's chris for science fiction we do have to take a break right now we want to thank general yeager who is still with us on the line from sacramento godspeed chuck yeager we appreciate you being with us here on cnn today thanks and good luck all right take care take care chuck all right we're going to take a break the countdown here continues cnn's live coverage continues we are now about 17 minutes away from the expected liftoff of the space shuttle discovery

02:42:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9720s)

liftoff of the space shuttle discovery the clock holding at nine minutes stay with us [Music] welcome back to our continuing and extensive coverage of the launch of sts-95 the launch of discovery the return of john glenn to space you're looking at live pictures taken from the goodyear blimp and some of the causeways docks and beaches where hundreds of thousands of people are expected to witness this launch now about

14 and a half minutes away this has been a controversial mission all along a lot of people have said it's a part pr stunt maybe it's a political payoff that it has really little to do with science among those critics a former nasa historian alex roland who now is in academia he joins us from duke university in raleigh north carolina alex is it a stunt um well it's not quite a stunt that is i think it's a trip that senator glenn has wanted for years and he finally prevailed upon nasa to let him fly and i think most of us even the critics of the flight think that it's a reasonable thing to do glenn has had a very distinguished career he never got his chance for his second flight and i think we'd all applaud it if he would just go up and we'd all recognize it as a nostalgia trip which we're all having i think if the problem arises when you represent it is science because it's clearly not science what about the risks involved alex do you think it's too risky putting someone of this age on a space shuttle where a situation might occur where they'd have to rapidly exit well i think there is a slightly elevated risk if you have someone first of all who hasn't trained as much as the other astronauts and also you know just isn't as young and isn't in their physical condition though senator glenn is a remarkable physical specimen for somebody seven seven seventy seven years old so i think there's a slightly elevated risk but i don't think it's terribly significant

[02:44:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9840s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9840s)

don't think it's terribly significant dr roland you're a critical uh to a degree of the raise on depth at any rate for this flight right but uh you're also in the history department at duke university and looking at space so far uh and its position in our economic priorities these these flights cost around a half a billion dollars a piece average around 450 to 500 million dollars that would build an awful lot of schools i meant to ask this the president we ran out of time but right but uh uh is in your mind history professor is it worth it um i don't think so clearly after we've we've developed this capability to send people into space we want to sustain it and maintain it i'm not sure we have to do as many flights as we do and in fact that number of 450 or 500 million is nasa's number i think a much more realistic estimate is a billion some people even estimate a billion and a half for each flight if you include development costs that's a lot of money to send people up when they really don't have very much to do in space if you look at it historically the phenomenon is that the great promise that we all experienced in the 1960s that these brave astronauts were going to go up and pioneer a new frontier for us has been disappointing in fact we've learned that it costs more than we expected it's more difficult it's more dangerous and the payoff from having people in space is far less than we'd anticipated so i'm not sure it really is a very good bargain former nasa historian alex roland thanks for being with us as we anticipate the launch of the space shuttle discovery a launch which he among others is harshly critical of we are going to take a break with the countdown clock now still holding at t minus nine minutes should resume in uh just a couple of minutes stay with us for more continuing coverage of the return to space for john glenn have you done that run

[02:46:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9961s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=9961s)

have you done that run [Music] you're down at a live picture from the kennedy space center the space shuttle discovery and the first potential glitch of the day apparently has just occurred nasa reporting some sort of master alarm situation which may cause him to extend the built-in hole which they're in at this moment let's go to cnn's john zarella with details john that's right miles nasa is saying they will extend the hold they do not expect it to be a long hold but it will be extended because of a master alarm that went off in the crew cabin the vent system this all is part of the procedure that we talked about about why they stay in these holds so they can run through their final last minute checks and during these last minute checks a master alarm went off so now they're running through the system again it's a cabin vent alarm they do not believe it's serious it may just be a sensor anomaly but they're going to run through the system again check it out before they pick up the countdown that's where we stand right now miles all right i'm listening a little bit to nasa tv right now as you speak john zarela and of course this vent check is very very critical as a spaceship ascends toward orbit i uh i had heard earlier i thought that everything checked out when they closed the hatch what has changed since well apparently they had at least one alarm go off and then there were some test conductors saying that perhaps a second alarm had gone off they did not believe it was a serious situation but they wanted to take the time now to go back and make sure to check it out to make sure that this is not a serious problem so they can pick up the count and again they have emphasized they do believe that the hold will be extended but only for a short period of time indicating they think that it's probably just a sensor and they can work through this miles john just in your dealings with nasa did you get a sense of the urgency of the problem if you had to put it on a one to ten scale what would you give it right now it sounds at this point as if it's just one of those it's probably around a three they don't think it's anything very very significant they'll get by but they're always like that you don't ever get the sense from nasa and

[02:48:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10080s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10080s)

don't ever get the sense from nasa and all the years i've been covering it that you have a real serious problem until they get to the source of the problem and then they find out exactly what they're dealing with right now they don't think it is miles thank you john charles stand by please let us know if you have any more information dave wolf has just been on the phone with the launch control center dave what do you hear right our integration and test team tells us that the master alarm went off at the time that the uh the probe uh the the pressure check cap was pulled off the set points are very close it may have just tapped a set point the exact date is being evaluated with kurt brown the commander right now uh likely this is just a close set point not an indication of a problem we'll know shortly all right but help us understand this for the person they they're pulling a plug on the uh the hatch and there's a pressure drop when they do that is that right there's a momentary drop in pressure as the cap is the plug is pulled and the cap is replaced the system is set to detect the pressure inside the cabin when it dropped just slightly it may have just bumped underneath that set point for the alarm system this may be exactly what was supposed to happen in the situation given that we had a slight dip in pressure as the cap was replaced it sounds like it would be an easy problem to troubleshoot it sounds that way at this point we're going to have to let the launch control team do their thorough analysis uh hopefully it won't take long though all right dave wolf loss for cronkite standing by here we will keep you posted of course as this continues once again john zarelis giving it a three on the scale dave do you agree with that oh or less likely when we hear the real reason now this may have been due to vent valves changing position in the cabin they cycle vent valves at this point in time we have to talk with current brown with exactly what was going on in the cockpit compared to the launch control center data and look at if this was an expected result or not all right once again a reminder of how complex this spacecraft is we're going to take a break we'll be back with more continuing coverage of the launch of the space shuttle discovery in just a

[02:50:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10201s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10201s)

of the space shuttle discovery in just a [Music] moment [Music] welcome back to the kennedy space center live pictures the hold continues nine minutes and holding as they work one problem which we are told is a minor problem with a detector which indicated some pressure gradient inside the space shuttle that problem remains unresolved as best we know they are now polling all of the people in the trenches at the launch control center let's listen in as they do that tape weather right sir we have no constraints to launch the mts manager for lunch the engineering one more time engineering director 212. go no go we are still completing our poll we will be resuming the count momentarily standby we've remained in the built-in hold an additional eight and a half minutes so far so i've completed my poll we are go all right thank you video launch director congratulations first the launch team is go your vehicle's ready the weather's beautiful out there on behalf of the entire launch team you and the crew discover you have a great mission

[02:52:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10320s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10320s)

mission thank you very much sir and discovery's clue is definitely ready to go and uh we would like you to proceed pick up the camera i copy that launch director and ciso entity countdown clock will resume momentarily gls npd pick up the count on your mark cls copies countdown clock will resume online mark 3 2 1 mark now we're now at t-minus nine minutes and counting we heard nasa test director doug lyons conduct a poll of the launch team also ralph rowe kentucky launch director conducting a poll of his team and uh dominic monaco also giving the input from the mission management team also located here in the firing room all systems are good launch control here dave wolf has been on the phone working on this uh apparent problem apparently a minor problem dave what have you heard about the apparently it's been resolved tell us what happened uh yes apparently it has been it's the environmental control system person in the control center's final call um it's as we said about an hour ago when the closeout crew took that pressurization check probe out to put the cap on there was a slight dip in cabin pressure the monitors that are supposed to detect that pressure and tell us if there's a leak got tripped it's an expected situation it sounds like at the current information we have and since the count is going i think this was the system working normally to tell us that we were losing a little pressure all right let's uh now that we've resolved the one glitch of the afternoon let's uh let's give viewers an idea of what they're about to see we had an opportunity a couple of weeks ago to sit down with commander kurt brown and i had him uh give us a sort of blow-by-blow account

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give us a sort of blow-by-blow account of what happens on the ride into orbit the way i describe that is it's uh you're sitting at the stoplight and some somebody runs in the back of you and it gives you a big jolt and you're on your way so that's that's pretty much liftoff a little whiplash obviously we're in the seats and we have all the headrests but it's it's definitely a kick in the in the back when you lift off the vehicle very quickly accelerates right up to uh two g's two plus g's and and we're on our way we don't really feel the roll program we see it more than feel it we again just continue to accelerate the vehicle has about 7 million pounds of thrust it only weighs about 4 million pounds so it's quickly you know quickly accelerating approaching the 2 minute point the boosters are separated about 2 minutes and 10 seconds and approaching two minute point the boosters start losing their propulsion you know we start slowing down the acceleration bleeds off to about one g basically what we're seeing on the pad with and then we have a big flash in the window and the boosters are gone they're separated and then we're basically just on the shuttle main engines feeding the fuel out of the big tank and then we start a slow climb up the hill we start accelerating again uh the g level starts building up as we we burn down fuel out of the uh the big tank and that happens up to about uh seven minutes a little over seven minutes into a flight the g continues to build at that point uh about seven thirty or so we're up to three g's now we've we've increased our acceleration up to three g's the shuttle main engine start throttling back now to hold that 3g schedule because we don't want to go for 3gs and we we hold that 3g profile all the way up to 8 minutes and 30 seconds into the flight at which time the main engines are commanded to shut down and we go from 3gs impressive 3gs because by that time you're really happy to to get rid of that three g's but it goes from three g's to zero g in about a half a second it's quite impressive quite a quite an experience i find that hard we're back live now we're back live and that is the gantry if you want to call it that the

[02:56:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10560s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10560s)

gantry if you want to call it that the white room that has been retracted from the space shuttle to discovery we're now in the five-minute range on the countdown difficult for me to see the clock where i am right now the space shuttle discovery apparently everything all set and ready as far as we can hear let's listen into mission control the voice of lisa malone and the communications between the commander and the controllers correct the countdown clock will hold at t minus five minutes due to np hold requests right you just there's a ten minute hold coming up didn't do it nine minutes well we're past that now but we're about to have a five minute hold and we're gonna try to figure out what that is all about apparently we have a reporter of aircraft in the area and uh that obviously is an important t-minus five minutes and holding let's listen to them alone again the range safety officer monitoring the air space within the kennedy space center vicinity reported an aircraft in the area well we've got aircraft in the area we've got ships in the area this isn't new let's go to johnson who has some more miles what they're saying is they have an aircraft in the area they can't find it so they are holding the count at t minus five until they find out where that aircraft is or was or if indeed it is in the airspace that's where we stand that's why they're holding range safety well i all right you gotta i got to ask a stupid question if they can't find it how they know it's here well we're lucky it happened now apparently the flight path that it was on was taking it near here and now it was supposed to have cleared the area in plenty of time but it has this team here will stand maybe the microphone picked up the buzzing in my ear maybe so maybe so how often does this happen we're joined also we should tell our viewers by bernard harris also a shuttle veteran a man who's done uh space walks and uh who's now firmly grounded right beside us here bernard how often do range safety considerations involve aircraft well most of the time it does because you know they're scouring the skies above the the whole area they keep people out they're also doing the thing same thing on the surface of the water

02:58:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10680s)

same thing on the surface of the water to keep ships out and so is the job of the rain safety officer to make sure that nobody gets into that precious airspace that we're flying in they've got to worry about ships in the water of course out there because they're going to dump those external tanks they're going to come down they come down pretty late not in this area but but the but the booster motors do they're going to be coming down with a parachuted down but they come in pretty hard that's true that's true they uh have parachutes and land about 20 miles or so out so we want to make sure we keep that clear we're going to be startling to be in your boat and have this thing land on top of that startling is a nice way of putting it dave wolf let me ask you this do you know what the what the sanitized no-fly zone is for uh shuttle launch actually i don't know the exact boundaries but we had a range safety hold on my first flight in fact a cancellation due to a range safety issue really okay so this happens now yeah there's another consideration too and that's a return to uh to kennedy space center uh abort if they have to abort they have to make a landing right back in here they don't want a lot of aircraft in the area or any aircraft in the area this is a vehicle which can't tolerate a holding pattern very well can it it's a dead stick landing with one try and one try alone right bernard that's right there's no holding at all in fact you have to come down and put it down the first time every time we're looking at pictures i believe of the offending aircraft up there i think we saw it uh maybe not we're not certain it's an aircraft anyway it could be the one it may not be with apparently nasa can't find it right now we continue in our hold at five minutes this is um let's see if we can listen into nasa for a moment you know any any hold is a little worrisome because as always it seems you know when things start going badly they they they compound and the whole you know some things happen things have gotten all keyed up to go and then something's right that's for you know these folks have been on their backs now for two and a half hours or so this is probably one of the more stressful painful parts of the mission is laying on your back with all

03:00:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10801s)

mission is laying on your back with all this heavy gear they'll be more comfortable as soon as the engine's cut off and they're in space their weight comes off and they're floating yeah they're not exactly barco loungers are they bernard no no not at all i remember my first flight laying there for about two two and a half hours and you begin to wonder about those natural functions that normally come into play here and upon uh liftoff though that all goes away that's right of course the first thing we activate is the wcs waste collection system when we get on orbit well comfortable not i've heard that one of the serious problems out there is staying awake when you're lying there on your back that long well you know i haven't told this publicly but on my second flight uh things were going so well and we were so comfortable in the hole that i actually dozed for a little bit until we came in the nine-minute hole and was shot we're going and as if to prove you have the right stuff there's danielle the nasa administrator who is over near the launch control center or uh perhaps near the shuttle landing looks like she's on top of the lcc is that right dave yeah and that was bob cabana commander of our first space station launch in five weeks yes and is he his role in today is what uh i can't tell you exactly all right we've got two-thirds or one-third of our astronaut office here supporting this mission wow okay all right well bernard harris um we don't want you to fall asleep now i'm curious does this does the anxiety level go up on board the ship or is this just uh like another sim well you know we have uh we train many aspects of this all faces nowhere can you get the entire uh training so you do it in phases and they have been through this about three weeks ago they came down here for dry count for those guys who are neophytes and new to the business and that makes you feel very comfortable about the machine that you're about to fly in did you feel comfortable dave absolutely comfortable uh the the training and knowing the people the talent here uh felt good about it there are crowds all

[03:02:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10920s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=10920s)

felt good about it there are crowds all over the place waiting to see this particular launch hundreds of thousands expected along the space coast there are some of them right there training binoculars to the sky wondering if they can see anything perhaps listening on the radio understanding the hold perhaps not wondering why it hasn't launched at this moment miles up uh why don't we take those models and put them up here and show what's going to happen in the launch profile immediately after the the engines start if the countdown is picked up we'll just drop this sure go right ahead walker won't drop it because we don't want to break it but but it goes uh about like this the uh at at t minus 10 seconds the command go for main engine start and then t minus six seconds these three main engines here at the base or the rear of the of the orbital spacecraft they ignite now they've got to reach 90 percent of their thrust by t minus two or there's an automatic shutdown at t zero that's the launch time the solid rocket boosters here on the side they ignite that's when the whole thing looks like it's going up on board computers command to hold down bolts there uh to be blown and that launches the thing into beginning its mission and that's at that point there's no turning back 140 million horsepower yes it's hard to turn it around yeah seven million pounds of thrust i guess that's a big firecracker now now as we see it goes up we've seen these pictures many times we're going to see it again today that seven seconds uh after launch the shuttle will have cleared the tower out there which we don't see here which surrounds it now it would clear the tower the the rule begins the machine begins to roll over so the the spacecraft the orbiter is on the bottom and upside down that's the role in yaw and that uh gives the crew a chance to see the horizon to orient themselves

[03:04:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11040s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11040s)

orient themselves in flight which they couldn't do otherwise that point the control of the mission is lost from here and goes to houston until until the landing back here now 30 seconds later they've they've throttled back the engines up to them they've gone up to practically full power but but the spacecraft is built to tolerate three g three three times gravity three times its weight earth and the with full power at that point still in the atmosphere they'd be getting more g-force than that and blow this thing apart so they throttle back until they get through that atmosphere that is slow causing this buffeting at that point and then they power up again and they're on the way to space at t-minus or tima plus 60 seconds one minute after they're up there uh the shuttle's at around 33 000 feet i think right today more than six miles up anyway and that's when the main engines are throttled up to 104 percent of their power to uh two minutes then another minute after that the shuttle is 30 miles high traveling at 2 890 miles per hour it says here i can't remember all these numbers that's right that's when the that's when the solid rocket boosters are jettisoned uh they uh they uh uh they uh that's t plus two minutes uh they're jettisoned they perish you down after seventeen thousand feet are recovered and rebuilt for future missions at t thirty two and a half minutes up there they go for transatlantic abort that would mean that they no longer have to worry about they're very difficult maneuver turning around trying to get back to the space center here to land but can land in africa or in spain they lose an engine if they lose an engine they can still make it across yeah at that point exactly right right and uh and and that's about the story very

[03:06:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11161s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11161s)

and and that's about the story very shortly thereafter the main engines are throttled down uh a little bit more there are that's early on uh at uh what time do they go into orbit actually if 17 500 miles an hour eight minutes plus uh team on it t plus eight right eight minutes thirty seconds let's see we have some news uh from john zarella who's down on the ground there john go ahead miles what we heard was that the range safety reported that there were multiple contacts that the radar was saturated within the box which is a 10 mile by 30 mile wide box and we seem to have seen actually what looked like sky riders in the distance a couple of faa aircraft have been sent up to chase them off and i believe now they gave the clear all clear and in fact the clock is ticking again miles your timing is impeccable john zarella as you stood there the clock began ticking down once again and uh gentlemen we should not expect another pause at this point unless there is another problem correct that's correct all right go all the way down what's going on right now today it's time to start the auxiliary power units this is what burns hydrazine three of them provides the hydraulic pressure for the arrow surfaces the ailerons if you will and to gimbal the engines that's pointing the engine to the right direction very critical these engines will be gimbaled and tested over the next minutes they'll presumably advise us at t minus two minutes that they have been able they're able to scrub that 31 second hold that they've built in there that's right we'll expect an error to occur there was a minor problem with the sensor determined weeks ago it wasn't worth fixing but it's going to cause a master alarm when the engines gimbal and the data will be checked by the people in the launch control center since the data hasn't has failed they need to clear that failure flag if you will by 31 seconds in order to prevent the automatic launch sequencer from initiating automatically a hold at 31 seconds so we should not see a hold if that error is cleared

03:08:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11282s)

if that error is cleared bernard harris 31 seconds is a very important milestone in the countdown what happens then it is well let me back up and talk uh what the crew is feeling inside the time that dave is talking about checking out the engines this is the first time that uh as you're sitting there for the hour two hours that you in the vehicle that the vehicle starts moving you can actually feel the gambling inside of this and you know that you're about to go somewhere and this is serious business uh at 30 seconds of course you've got your visors down of course called at two t minus two minutes and uh everybody is is anxious and uh ready to to get this show on the road and isn't it true at this point too the shuttle's computers sort of take over at the and then it becomes uh an opportunity well you're gonna fly right yeah that's that's exactly right and that's another critical point of course because when you turn over the launch control computers to the onboard computers then they all have to come up to speed and be able to take a takeover launch i have trouble reading the electric lights in that clock what is that two minus exactly two thirty thirty two thirty we're all having trouble with that vote the computers are right now making thousands of checks per second of all the orbiter systems if anything should come up they will flag it here that's the retraction of the gaseous oxygen vent hood that is a liquid oxygen tank filled with a half a million gallons of liquid oxygen and liquid hydrogen that sucks the egg the extra that's venting out of the top away it's moving away from the orbiter so far everything going according to the script right everything according to the script yep looks good again we're looking for the solid they're talking about the engine two pitch i believe they're removing that hole i believe that's what they just said

03:10:04 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11404s)

[Music] all right the winds of discovery lift us onto the future system have been closed and they've gone to oxygen so they are ready to fly now it's just an electric environment here today okay apparently there's another range safety issue to report they're gonna hold at uh i'm sorry they just say the range was clear they've removed the hole at 31 seconds we go to a fully automatic computer controlled launch sequence checking just thousands of parameters per second even checking the main engines after they're lit at six seconds that they reach 90 thrust and everything's normal all right uh all systems are go that's the report we're getting from the launch control center here at the kennedy space center that's the president and the first lady getting up to see the launch let's just listen for the rest of the way t minus 20 minutes 20 seconds cool your mission [Music] we have a go for engine start five four three two one booster ignition and liftoff of discovery with a crew of six astronaut heroes and one american legend this discovery roll program roger roll

03:12:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11522s)

discovery [Applause] discover houston go at throttle up roger go with [Music] so [Music] so one minute and 50 seconds into the flight discovery now at an altitude of 25 miles traveling at a speed of 2 900 miles an hour the next event will be burnout and separation of discovery's twin solid rocket boosters discover houston to engine banjo copy two engine banjo

03:14:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11641s)

capcom susan still informing the crew that in the event of a single engine failure houston performance nominal pop-up discovery could now reach the transatlantic abort site at banjool however telemetry indicating all three engines continuing to perform well and discovery's performance to this point two and a half minutes into the flight has been as expected discovery now traveling at a speed of 3 500 miles per hour at an altitude of 43 miles downrange from the kennedy space center 70 miles all systems are continuing to perform well that crowd's going to miss this isn't it three minutes into the flight discovery now traveling at a speed of 3850 miles per hour downrange from the kennedy space center at a distance of 86 miles just about five minutes of powered flight remaining on board three minutes or so into the launch of space shuttle discovery everything is nominal as nasa would put it the president watching with binoculars the first lady beside him the critical period of this flight everyone talks about is when the solid rocket boosters are uh attached to that orbiter i think everybody breathes a side relief who knows a little bit about the space shuttle when they separate don't you that's true it's a smoother ride afterwards that's 5 million pounds of thrust that you've let go you've used it all and you're on the main engines it's uh it's uh it's always critical though let's keep an eye on all this what's going on right now bernard well what's happening right now is uh as dave said we've got brother solomon everybody inside is breathing a sigh relief and you can tell here at the launch site control center people are also um and of course the main reason that's the challenger accident and that's the most critical phase of the flight so now the crew is uh sort of laying

[03:16:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11760s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11760s)

so now the crew is uh sort of laying back and taking it all in but physically it's still the physical ride very violent ride very noisy on the inside uh it's hard to talk to your fellow crew members and right now the g load is beginning to build up and we'll go just after these solid rocket motors release down to one and a half g's and work our way up to about three g's right now if we lose one engine we can still make it across the atlantic on two engines for an abort site and that would in this case be banjo the gambia and uh at what point do we get to what is called the abort to orbit or abort once around mode at four minutes 12 seconds we can make it to orbit without that engine we'll press on up to orbit we'd prefer that we have pressed to mikko right now dave so we just got the crap depressed amiko at this point that we can get all the way to main engine cutoff a nominal orbit even if we lose an engine so we've got redundancy in the main engines right now so this is the critical moment when we say you're headed to orbit right that's right unless we would lose two engines and we could still do a transatlantic abort at 7 600 miles per hour every inch of altitude you gain is in your favor that's right and speed and speed it's speeding out speed is critical to get you safely in orbit uh we have to reach what's what was uh termed in the old days escape velocity that's around 17 000 miles per [Applause] was that discovery could make it to the transatlantic abort side at banjuel in the event that two engines should fail but all three engines are continuing to perform as expected discovery now downrange from the kennedy space center 385 miles traveling at a speed of 9 100 miles per hour at an altitude of just about 68 miles all right what they just said is that they lost two engines they could still do a transatlantic still make it transatlantic and momentarily we should be able to get to

[03:18:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11880s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=11880s)

momentarily we should be able to get to orbit even with the loss of one actually we're past that point doing good looking very good we are going to take a replay of that launch because i got to tell you that was a spectacular sight this picture that we saw today was extraordinary not a cloud in the sky here let's uh let's roll the tape back and take booster ignition and liftoff of discovery with a crew of six astronaut heroes and one american legend lisa malone with her words the words that have been such so anticipated right you can really feel that role well give me a sense of what the uh the educated eye is looking for as you go up uh and as you watch a lot so you're not inside we're looking for a very controlled role that rolls directly to the azimuth that we desire and then stops and is stable really critical because that's going to hit you in the right direction of course when you lift off that much power you want to make sure that you are going in the direction that it's necessary for proper insertion uh on lifelike we actually had probably the most role uh trying to make it to the mirror station and uh there were a lot of nervous people because we had to roll about 90 or so degrees and stop uh basically on a dime and at that point we did go past a little bit but then correct it and headed off the right direction again this is a laboratory going up to orbit we only want to pull three g's we throttle the engines back in the last two minutes of the ascent to hold the g's down to three because it has delicate instruments this is also the 25th flight of this vehicle and uh we can't do seven and a half g's like john glad did on his first launch on a vehicle meant to go one time good point if you had to make all your

03:20:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12000s)

good point if you had to make all your experiments able to withstand 9gs you'd have some serious problems 3gs makes it a little more realistic we're going to watch this to the solid rocker booster separation which was really rather spectacular you could see this see them sort of lazily tumbling through the air before the shoots would uh deploy and they would land off in the atlantic and be recovered of course to say they're recoverable is perhaps a euphemism there's a lot of work that needs to be done on these boosters to make them flight ready again right right really uh once these come off they are picked up out of the ocean and towed back sit in salt water for a long time compared to the sophistication of this vehicle and its boosters how primitive that flight 36 years ago seemed you know what john glenn's assignment was at the time that his booster fell away and he was in the craft depends his one assignment was to keep his eye on the booster because they wanted to know how far a man could see in space it shows where we've come at that time we wondered if humans could even see their eyeballs might change shape could they digest food would their blood pressure be regulated we had basic questions we've gone so far beyond that in our research now all right well in new concord ohio they have been watching this with probably as much anticipation as any place on the planet our jeff flock is there jeff uh were there some cheers in that auditory in there miles what a thrill when this happened i i want to show you the scene what happened inside this gymnasium this is john glenn's old college muskegon college and let's just listen to it as it unfolded don mckendree was the former president principal at john glenn high what was

03:22:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12120s)

principal at john glenn high what was going through your mind at that moment well that was great that was the excitement that was just absolutely fantastic i was here as a student in 62 when john glenn went off and i know the anticipation we all felt then but it seemed like it was greater this time were you scared at all yes i was scared i mean i just having known him personally and still know him as a friend i had a little bit of apprehension but boy was i relieved when i saw that thing go off okay a veteran and then someone new to it katherine daubner's a a student here at muskingum you really had a look on your face well it was everyone was cheering and the whole thing i kept thinking of is he's not up there yet you know like just anything could happen between now and then and so it was like until i couldn't see see it it was like okay i'm waiting i'm waiting i couldn't cheer yet the whole time my heart like even my heart's still pounding from it because it was just so amazing to hear everyone scream and like the whole reaction yeah pins and needles here obviously mr cronkite remembers all of the delays when john glenn went up last time and we thought we're gonna have a repeat of that here for a moment but folks that have been through that were kind of reminiscing about that but everybody very happy here at his old college believe you of that shot that we had out there that kind of gives you a perspective of where we are here in ohio in the middle of america uh john glenn on his way and they're very happy here in new concord jeff flock thank you very much a little slice of uh ohio the land of astronauts apparently for some odd reason we haven't figured that out yet maybe we'll get an answer before the end of the day we have one more replay to show everyone here this one pointed in the opposite direction let's take a look as we look at it 36 years ago those were the words we all remember walter yeah oh they uh i was almost speechless that day not quite as speechless as when man landed on the moon i couldn't think of anything to say after gee whiz

03:24:02 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12242s)

anything to say after gee whiz it's hard to come up with words to match the occasion now dave wolf you brought some uh old newspapers here is that right that's right stumbled across a few things in the last few weeks uh first of all a copy of the griffin george daily news from february 20th 1962. all right we might remember this yeah you could read that headline is that where you were at the time that was the launch day i was five years old the uh the average age of the crew right now was up that's going in orbit was five years old that day you felt fine tremendous all right i think we all remember that though i wonder i was about six years old at the time and uh was inspired by what was going on in the space program to do what i'm doing today walter would you sign that copy for me oh i'd be honored to i don't know why i'm entitled to do that but i shall on that note uh we will take a break and uh but before we do that we're gonna go to jsc first or after all right we're gonna take a break when we return we'll uh check in with houston tony clark in houston control the shuttle has shifted there and that's where we'll check in and see how things are going there [Music] some 15 minutes seven seconds into john glenn's second flight into orbit everything seems to be working perfectly well on the space shuttle discovery a fairly flawless picture here at the kennedy space center i don't know how you could make it look prettier than that that's it can you come up with anything i don't think so wonderful all right at night i get more nervous watching than being in it let's uh let's move it along to houston which is where nasa has moved things along so to speak control of this

[03:26:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12360s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12360s)

along so to speak control of this mission of course taking care of all throughout its nine days at the johnson space center cnn's tony clark is there tony miles you're looking at a shot of mission control in the center and you can just barely see her she's in a light colored jacket that is linda hamm she is the flight director she has the operational control of this flight and to her right is in the dark jacket is susan still she is an astronaut she flew twice on missions last year she is the voice of mission control both to the shuttle and the voice of the shuttle to mission control it was interesting watching as the launch was being on hold all of the 35 or 40 or so people who were sitting at consoles patiently waiting and then when the launch happened it was interesting to note that there are about seven or eight tv monitors in here showing the the liftoff itself but no one was looking at those all of the flight controllers were looking at their screens data on their screens monitoring how the liftoff was going of discovery because as you know about 30 seconds into the launch all of the control shifts from florida to here and it will remain here until the shuttle lands miles tony uh give us an idea of what's uh in store in the next day or so uh for this mission uh it's a nine-day mission there's a lot to talk about uh what's on tap right away well you know one of the things that gets deployed uh very early on is the uh a little uh communication satellite a little military communication satellite that will be interesting a couple of days from now the spartan satellite will be deployed that is going to to look at the the sun and sun's corona because the effects of eruptions on the sun have an effect on electrical grid satellite communication here in the united states and then there are a whole host of medical experiments that will be performed in the space have uh laboratory that is inside the payload base just uh you know just shortly after they get on orbit they will open those

[03:28:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12480s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12480s)

get on orbit they will open those payload bays and that's when the experiments begin being exposed they start turning on systems uh the rest of the day getting everything activated so it's still a lot to be done today and uh let's talk you know when they open those payload days for a very specific reason uh bernard harris uh that has a lot to do with the radiating heat in the space tell us about that it sure does and and that was my job on the last mission was to uh open up the payload bay doors and also to bring out the antenna for communications the uh the doors actually have the radiators and which the radiate heat many people think that it's cold in space and that's true and it's hot in space but it's even hotter in the cabin because of all the electronics and avionics computers they give heat we pull that heat off and we run it through the radiators and radiate that into deep space and that cools keeps the the spaceship cool you know one of the things uh we hear sometimes about but which astronauts sometimes are reluctant to talk about is uh well the nasa euphemism is space adaptation sickness uh and this is when that comes to bear and this is the most critical time isn't it bernard well you know it actually starts on the pad we have learned over the last 30 years as you're sitting there for uh three hours or so in that recumbent position you have this fluid shift from your legs down to your head and uh that begins that process and then you go in orbit under these g loads and then uh eight and a half minutes later you were exposed to zero gravity and yes this is where sixty percent of the crew members will experience the the most uh common space adaptation syndrome that is space motion sickness as the medical doctor on board our flight it was my job to make sure that the crew was stable during that point because they have a lot of activities to do during that day without naming names was it a particularly rough ride for the crew or is it typically okay it's typically okay and when i say 60 percent that varies you know some people just have a little sensation in their stomach others will outright uh

[03:30:01 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12601s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12601s)

stomach others will outright uh you know have to use their their bags uh on orbit uh for the most part uh you fly the second time and it's much better would you concur on that one dave yeah i concur this is an interesting time in orbit it's very busy they're converting this rocket ship into a science laboratory everybody is active they're getting out of their spacesuit there's a lot of movement it becomes essentially a kelp bed of spacesuits floating around and at the same time they're adapting to space uh pedro duque for instance is his first time in space and uh he needs to get adjusted but he still has a big job to do absolutely yeah i i would think uh let's take a look at the president by the way he is at the launch control center taking a walk through he was on the roof uh watching the uh launch from a little better perch that we have right now let's take a look at those pictures if we can and he he expressed uh some some jitters uh before the actual i guess he's uh in a car on his way there is that uh that appears to be a shot uh from uh the blimp in any case uh the space adaptation sickness this is a recurring problem i don't want to dwell on this because i know you guys don't like to talk about it too much but the fact the matter is when you start looking at people there there's the president along with the first lady and in the foreground daniel golden the nasa administrator we can't hear what they're saying but clearly offering some congratulations to the entire launch control team anyway back to space uh uh sickness uh it's been studied for many years now seven to nine times a year they do it safe and they do it on time except when planes get in our way great space team of america i want to introduce to you a man who cares about our space program i want to introduce to you the first president of the united states who had the courage to come down here to nasa kennedy

[03:32:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12720s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12720s)

nasa kennedy and watch a shuttle launch in real time i wa it's all right [Applause] i want to introduce to you a man who cares about america's space program who cares about america's future and when we had those battles up in washington he made sure we're going to build a space station on november 20th december 3rd and 7 launches a year for the next five years [Applause] ladies and gentlemen i give to you the president united states bill clinton thank you very much thank you thank you let me i have so many things to thank you for today but among other things i i have to thank you for making the first lady very happy because about a year ago she said you know we need to make a list of all the things we want to do before we leave office i said okay what's on your list she said you have to take me to a space launch i've want to go we didn't have the courage to come here we had confidence in you and pride in america and a conviction that our space program is good for the united states and good for the world and i want to thank you today because you made all of us terribly proud let me also say that because of the intense interest in this in the media and among ordinary citizens the american people have had a unique opportunity today to see what you do not just at the moment of launch but in the weeks and months and years that preceded all the hard work and all the preparation and now they will learn over the next few days

[03:34:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12840s)](https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12840s)

few days all the things that are being done in space that advance not only our mission in space but the quality of our life here on earth and all of that too has been made possible the last thing i'd like to say is it has been immensely impressive and important to me to have the chance to work with nasa over the last six years and see the revolution which has been undertaken so that now you can on virtually the same budget you had six years ago do eight launches a year instead of two and continue to explore the outer frontiers of space i thank you for all of that america is very very proud of you today thank you and god bless you the first president of the united states to witness a space shuttle launch only the second president of the united states uh to be here for an actual launch john kennedy never got an opportunity i'm sure he would have liked to have come and seen one i'm sure he would have yeah all right well on that note we uh some final thoughts bernard well i i guess i would like everybody to know that you know we're here for john glenn but they've got a long road ahead of them the next nine days they'll be working in the space have module that was commercially developed of course as part of nasa's new initiative get commercial involvement 83 experiments that's going to be a tough mission what they're up to and it's down to the five minute increments dave any closing comments yes this this is a typical inter multinational scientific mission typical of the kinds of things we'll be doing on the international space station that we begin launching in about three weeks uh one element from russia another from america two weeks later it's going to be an amazing five years building this station and operating it for 20 years as we conduct research in orbit gentlemen thank you all walter it was a distinct pleasure and an honor i think we can say one more time that this broadcast was dedicated to john holliman

03:36:00 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=12960s)

holliman who was a space reporter until he died unfortunately in an accident a few weeks ago uh i think uh miles you did a great job john would be proud of him i think he was watching somewhere and i hope he um hope he enjoyed the show holy cow what a sight he probably was saying thanks very much to all of you for being with us and we will continue our coverage all throughout the mission as always stay with cnn five four three two one booster ignition and liftoff of discovery with a crew of six astronaut heroes and one american legend discovery roll program roger roll discovery [Applause] [Music] roger [Music] uh it's always critical though let's keep an eye on all this what's going on right now

03:38:03 (https://www.youtube.com/watch?v=TkeJQVAzgHQ&t=13083s)

two one booster ignition one minute and 50 seconds into the flight discovery now at an altitude of 25 miles traveling at a speed of 2 900 miles an hour

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END